The Bristol Medico-Chirurgical Journal.

"Scire est nescire, nisi id me
Scire alius scireet."

JUNE, 1907.

Obituary Notice.

EDWARD MARKHAM SKERRITT, M.D., F.R.C.P.

Thou whom none knoweth, yet they lie
Who say Thou art not, speak with me!
I am because Thou bidst me be,
And when Thou bidst me, I must die. . . .

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Oh, rend the Heaven! Break up the height,
The depth, between Thy works and Thee!
Tear off the veil, that Earth may see
The fount of good, the judge of right![1]—BOURDILLON.

IT is only human to desire to record some memorial of a man we have lost, especially when he has been associated with us in many years of similar work, and when we so well know that his life was a model from which we may ourselves draw many useful lessons. In the twenty-five years of the life of this *Journal* we have had many occasions to give an "In memoriam" record of the lives of those who have gone before. Our readers will remember Augustin Prichard, Edward Long Fox, William Johnstone Fyffe, Joseph Griffiths Swayne, Henry Marshall, Aust Lawrence, and the first

[1] *Monthly Review*, March, 1907.

editor of this Journal, James Greig Smith, whose life, all too short, was terminated somewhat abruptly in the midst of active work by an attack of pneumonia. And now we have to lament the death of Edward Markham Skerritt, also prematurely cut off by pneumonia at perhaps the most useful period of his career.

We cherish the memory of our "mighty dead," but their message to us is that it is the business of man to keep things going; no one of us is indispensable, but, nevertheless, the best of us are much missed at the time of departure. He who has so lived as to "leave the world a little better than he found it," must of necessity leave a gap when his chair becomes vacant.

That such a gap followed the death of Dr. Skerritt was shown by the striking demonstration at the funeral, which took place on Thursday, May 2nd, 1907, when the presence at St. Paul's Church of a very large number of mourners, including a large proportion of his own profession—by whom he was so much esteemed—gave the most pronounced testimony to the widespread feeling of regret that his life's work had ended. He was buried at Redland Green amidst every manifestation of sadness and regret, expressed not only by his own immediate friends, professional colleagues and patients, but by representatives of the various public bodies with which his work had been associated.

Edward Markham Skerritt was born at Chelsea on December 30th, 1848, and he died on Monday, April 29th, 1907, at the comparatively early age of 59. His education commenced at Mill Hill School, but afterwards he was sent to Amersham Hall School, where he found as school-fellows many associates who have risen to considerable distinction in various walks of life. His early education appears to have been of a robust and vigorous if not of an ascetic type, and he ever after lived a most active, strenuous career, never sparing himself or taking rest and quiet. On leaving school he matriculated at the University of London (1866), and graduated as B.A. Lond. in 1868. In the following year he passed the Preliminary Scientific M.B. Examination, and then entered as a medical student at University College, London, at a time when this school was in a very vigorous state, and attracted a large proportion of the ablest students in London,

many of whom have come to the front and are occupying leading positions in London and the provinces. With such competitors Skerritt easily held his own; he won many prizes and class distinctions, and when he passed the examinations for the M.B., B.S. he obtained the University gold medals for Physiology, Medicine, and Obstetric Medicine. In 1874 he obtained the degree of M.D. Lond. As a student he was noted for his unflagging industry, and a methodical habit which enabled him to acquire knowledge easily and to learn accurately. Although reserved, he was much liked by his fellow students, who admired his ability, and were attracted by his simple straightforwardness. As a mark of the success of his student's course he was elected a Fellow of his College, and he obtained the Atkinson-Morley surgical scholarship, which was the highest surgical distinction open to him. As Sir John Erichsen's house surgeon, and Sir William Jenner's house physician, he had the fullest opportunity of gaining the soundest medical and surgical skill, so that by his own natural ability, and by the best possible training, it was felt that Skerritt had laid an excellent foundation for a very distinguished career. It was in 1875 that a vacancy for physician—caused by the death of Dr. Samuel Martyn—at the Bristol General Hospital gave the opportunity which the electors wisely accepted when they appointed him to serve in an institution which for thirty-two years since has gained so much from his painstaking and skilful work as physician. He became M.R.C.P. in 1876, was elected a Fellow in 1885, and afterwards a member of the Council of the Royal College of Physicians of London.

As a clinical teacher he will long be missed. His instruction was good, and he was earnest in imparting it. Many generations of old Bristol students must have a grateful recollection of the benefits they have themselves obtained by his example as well as by precept. As Joint Lecturer and later Professor of Medicine (this course having been always divided between a member of the staff of the Infirmary and one from the Hospital) he was methodical and clear; he devoted especial attention to diseases of the heart and lungs, and these lectures

with a course on general febrile maladies, usually occupied the whole of the time available.

For many years he acted as Secretary, and afterwards became the first Dean of the Medical Faculty in the University College. A colleague writes, "These offices were no sinecure, and gave him an enormous amount of work, as the negotiations for incorporation extended over some years. . . . Dr. Skerritt was *ex officio* a member of the Council of the College, and in all matters medical was the authority; but his knowledge of business, his sound judgment and shrewd common sense, made him a valuable member of the Council in all that related to the welfare of the College." The engineering Chairman of the Council once remarked to the writer that Skerritt appeared to be "a very level-headed person;" and so he was, for he had a wholesome detestation of fads of all descriptions. It was felt that he was not only a skilled physician, but a wise counsellor, a man of sterling uprightness, and of unimpeachable sincerity, essentially a man to be trusted.

He held in turn all the offices which the local profession had to offer. He never declined anything which appeared to be his duty, or in which he could do good service. As Secretary for many years of the Bath and Bristol Branch, as President of the Branch, as a member of the central Council of the Association, as Treasurer of the Association in 1902, and Vice-President in 1904, he was a mainstay of the British Medical Association, and during the last few years, when intricate details under the new constitution have been much discussed, Skerritt's knowledge and clear judgment have been invaluable. Others have written on these points in the *Journal* of the Association (May 11th, p. 1159), and with regrets that "his place in our Council Chamber is empty, and with sorrowful hearts we say farewell to one who has left us before his time."

Skerritt was one of the very early members of the Bristol Medico-Chirurgical Society, and was rarely absent from its monthly meeting. He was President in 1892–3, and then gave a very characteristic presidential address on "The Teachings of Failure." Many other papers and addresses have been published

from time to time in this *Journal*, and it will be generally admitted that Skerritt never wrote for the sake of writing, and that whatever he wrote is worth reading. He was not a voluminous writer, but he always had an object in his writing, and expressed himself clearly and concisely. His Bradshaw Lecture, given before the Royal College of Physicians in 1897, is an excellent outline of things which had passed through his mind for many years, and in which he held very definite views. He had no great ambition to be known as an author; his time was actively employed in other ways. He was no advocate of a gospel of inactivity, but his powers were commonly expended in other fields.

The Queen Victoria Jubilee Convalescent Home has, from its commencement, derived the advantage of Dr. Skerritt's presence on its Board of Governors, and his work there is shown by the resolution adopted by them at a meeting on May 17th, as follows: "The Governors of the Convalescent Home desire to place on record their sense of the great loss the City and many of its most useful institutions has incurred in the removal of one whose remarkable abilities were only equalled by his kindness of heart and his readiness to serve others. They record especially their appreciation of the interest he took in the founding of this Home, the value of his aid in arranging all its organisation, and the constant service he rendered in its management."

Another institution which owes much to his services is the Winsley Sanatorium for the poorer consumptives of the three neighbouring counties. He was a member of the original executive committee, and he took a leading part in the initiation and furtherance of a method of treatment which his long experience of chest diseases had shown to be most desirable. It was a satisfaction to him to feel that this Institution is now in good working order, and is becoming more and more increasingly useful.

With one exception he was the oldest member of the Medical Reading Society, and he was present at the centenary meeting, when eighteen past and present members met at dinner on April 3rd. He was then in good health and spirits, looking

strong and wiry as usual, with a good expectation of a long continued career of useful activity. The monthly meetings of this Society have conduced much to the furtherance of good fellowship, and Skerritt's presence has doubtless tended towards the diminution of such professional jealousy and rivalry as at times exists amongst many professional communities. Skerritt was elected a member of this little Society in 1876, so that he had assisted in over one-third of its centenarian life.

With regard to the social characteristics of Skerritt, the following personal appreciation is written by one of his most intimate friends, Dr. Barclay J. Baron :—

" My friendship with Edward Markham Skerritt began in 1883, when, as a new-comer to Clifton and a near neighbour, I called on him. He was courteous and kind, as was his wont, but, more important, he was distinctly encouraging as to my prospects of practice in Bristol. This faculty of encouraging younger members of the profession in times of difficulty was a trait in his character of peculiar value to many of us. He invited me to go round the wards of the General Hospital with him, and of this invitation I availed myself, during the next year, on many occasions. I profited greatly by the clear, logical way in which he arrived at a diagnosis. I was struck by his faculty for deducing feasible theories as to the causation of disease from ascertainable facts, and in particular by the simplicity of his therapeutic measures. Markham Skerritt was no more attracted by newly introduced, well advertised or fashionable drugs than he was by the change of fashions in millinery, and I feel certain that in this respect his influence as a physician was of a decidedly beneficial character. At this time he prescribed alcohol for patients in smaller quantities than most men, and as his experience increased he prescribed it less and less, until, in his last days it certainly occupied an unimportant place in his medical armamentarium. His great reliance was on rest and warmth, on *vis medicatrix naturæ* rather than on drugs.

" In 1884 my humble dwelling was visited one evening by Skerritt and Aust Lawrence, and the greeting of the former was ' Le roi est mort : vive le roi ! ' This meant that the late Dr.

Burder had presented his resignation of the physiciancy of the Bristol General Hospital to his colleagues, and Skerritt asked me if I would become a candidate for the vacant post. Largely owing to his support I was appointed without contest, and thus became his Hospital colleague. I had by this time formed a very high opinion of my new friend, but I had never seen him in counsel with other senior members of the profession until the first staff meeting took place. I was greatly interested in finding that my estimate of him was that held by all his colleagues, and if ever a difference of opinion arose Markham Skerritt almost invariably induced the staff to adopt the views which he himself held. In debate he was certainly very strong, because he never placed himself in a position of antagonism to others without having first satisfied himself that he was right, and with rare ability he never under-estimated the strength of his opponents' attack, and so was fully prepared to meet and overwhelm it.

" Others have spoken to his Hospital and University College career, and to his sterling value to practitioners in consultation. As a consultant, as indeed in other relations of life, Skerritt listened rather than talked. He was distinctly reserved, and, indeed, many patients would have liked him to unbend and say more. In point of fact, he was essentially a home-loving man. He donned a dress-coat unwillingly, and was seen but little at clubs and dinners ; but he received his guests in his own house, at all times, with the refined hospitality of a large heart. Those of us who knew him intimately in Clifton found that he very frequently relaxed the stiffness of his manner, and was full of humour and good fellowship. But to see Markham Skerritt full of the love of life, really humorous and genial, one must have done as I did, gone down and stayed with him on Dartmoor or Exmoor. When I first visited him at Throwleigh, near Chagford, I was met at the farmhouse gate by him with no hat, with certainly no waistcoat, I believe without a necktie. He had then not quite developed his intense devotion to open air living, but he had at least joined the ' hatless brigade.' It was a charming picture of family happiness which greeted me as he, his wife, his daughter and I wandered over those grand old moors. He was

intensely observant of the ever-changing beauties of flower and insect life, sunshine and cloud, and deeply impressed by the wonderful solitude of the Devon Tors. For his was indeed a very simple, natural mind, and whilst he pretended to no profound knowledge of Botany or Entomology, he lived his days of leisure on the countryside with a spirit very responsive to its open secret.

"On another occasion I visited him at Avill, near Dunster, whither he was in the habit of taking horses and hunting with the Devon and Somerset Staghounds. By this time he had become a great devotee of the open air, and it was his delight for us all to have breakfast in front of the farmhouse door at a table where a robin, which he had induced to recognise us as friends, came regularly to feed from our plates. On one occasion Aust Lawrence was also a guest, and on the cold days—which sometimes set in at the end of August—it was a constant source of entertainment to watch him (for he hated too much cold air) taking every opportunity of our host's temporary absence from the room to shut the casement windows, and to see Skerritt on his return, finding that the curtains were not properly blowing about, open the windows again with distinct rumblings of wrath at the stupidity of servant girls who did not appreciate their privilege of living in God's air.

"Whatever Skerritt did he did with all his might, and hunting was no exception to the rule. I have known him on horseback from early morning till evening under a blazing sun, with no more refreshment than a few raisins and a little chocolate, and his 'pistol' full of cold tea. He never, with that modesty we all know was so deeply ingrained in his nature, talked much of wonderful runs at which he had been present; but once a well-known sportsman, comparing him with another hunting doctor, said: '—'s heart is as big as a threepenny bit, but Skerritt's is as big as your hat.'

"Skerritt was genuinely fond of physical and mental hard work. I spent many an hour watching him dip clinkers in a bucket of cement to build them together into a large fernery at Thornton House. He worked harder than any mason could have

been induced to do, without coat, waistcoat or collar, and with his sleeves rolled up, and was bubbling over with fun when he was nearly caught by patients in this unclothed condition. He stayed with me in the country at my cottage, and begged to be put to work in the garden. He and I spent many an hour at the back-breaking labour of strawberry planting, and more than once, when I had a mind to ease off for a time, he compelled me by precept and example not to be lazy. He took a deep scientific interest in watching my gardener's attempts to overcome an invasion of 'spot' in tomato plants, and was as delighted as a schoolboy when he, his wife, my wife and I, cut into a peach weighing 17 oz. which my gardener had grown.

"He had a great love of altering the residences which he purchased, and employed no architect to draw his plans. For months he was busy designing and seeing executed the beautiful oak room which served as a waiting-room at Thornton House and at Edgecumbe House, and the beloved fittings of which followed him to the house in which he died, and were there re-erected. In this last place of residence he gratified to the full his architectural talent. Moreover, he undertook personally the improvements in his lovely garden, and discussed with me, as if the matter were one of extreme importance, the selection of apple and pear trees. In the last weeks of his life—in fact, up to the very last day he was able—he was engaged in heavy rock work in the quarry attached to his house, which even involved blasting. This work my dear old friend leaves, like few things to which he put his hand, unfinished.

"Many years ago he and I went to Berlin together to see for ourselves what we could of the value of Koch's Tuberculin. I am bound to confess that I had intended to make this something of a picnic among my old German friends, but I found I was vastly mistaken. Skerritt went to work, and work he did from morning to night, and compelled me to do the same; and in the week we spent there we worked as hard as I have ever done in my life. This was Markham Skerritt, and his powers of endurance were such that it was extremely difficult to keep pace with him. On our return we wrote a joint paper on Koch's

treatment of Tuberculosis, which appeared in the *Bristol Medico-Chirurgical Journal* (Vol. VIII.). This we started to compose at 8 p.m., and Skerritt left me in a most dilapidated condition at five the next morning, having written—with a short interlude for supper—right through the night. So stubborn was his iron constitution, that he was able to go home, have his bath, and set about his daily round of work. When in Berlin we stayed in the house of my honoured old friend Sanitätsrat Dr. Patschkowski, and during our stay our hostess celebrated her birthday. I shall never forget seeing Skerritt with a huge bouquet—which we had purchased for the occasion—in his hand, ushered into a room where a dozen German ladies were in the midst of a 'Kaffee Klatsch,' nor at the supper which afterwards took place, hearing him—who knew no German, whilst some of the guests knew little English—endeavour to converse and make a little speech in Latin. I have had extremely kind messages of condolence with his widow from the friends he then made, showing that he has not been forgotten.

"As husband, father and friend, Markham Skerritt was a rare soul. He ever gave more than he wished to receive; he ever gave of his very best. His judgment was sound and unerring, and his desire to help all those who came to him was boundless. Busy as he was, he could always find time to help others. His opinion was expressed with complete independence to friend, doctor and patient alike, and while such independence may be said to come more easily from men in easy circumstances, this, in my opinion, has no bearing whatever on what was a sterling quality of Markham Skerritt's mind. It was a characteristic proper to him by inheritance, and fostered by environment.

"The shock of the death of his only child—coming to a man of his reserved but deep and tender nature—was one from which he never completely recovered. Long after her death his wife and he dined quietly at my house, and more than once in the course of light conversation his eyes filled with tears, and I knew that he was standing by a graveside. Once speaking to him about it, and apologising, as I did, for reopening a wound, his reply was: 'You have not done that, my friend, because it is always open.'

"On Monday, 29th April, large numbers of us felt that one of the finest types of Christian gentlemen whom it has ever been our happy lot to know left us and joined the great majority."

Geo. W. Russell, speaking of the Ideal Character, remarks: "The man who owns it may be very homely, very insignificant; as the world judges, very uninteresting. But the character itself bears the sign-manual of Heaven, writ large in purity and courage, and gentleness and unselfishness; and the man, by a secret power which he has never realised, leavens the world in which his lot is cast." And further he quotes from Dr. Liddon: "It is by the work of grace in lives such as this that both the church and society are braced and sanctified; it is from such lives that a truer, loftier, more disinterested, sterner, yet withal, most assuredly not less affectionate spirit than that of common men radiates into and elevates an entire generation." [1]

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CASES ILLUSTRATING THE MORE UNUSUAL COMPLICATIONS OF PNEUMONIA.

BY

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THE following cases illustrate some of the rarer complications met with in pneumonia. The occurrence of such complications forms one of the strongest arguments in support of the modern conception of pneumonia as a general infection. These instances occurred in a consecutive series of 126 cases of pneumonia. They comprise **peritonitis** (2); **thrombosis of vessels** (3), in one of which there was also general pneumococcic infection; **endocarditis** (2); **nephritis** (1); **arthritis** (1). In the same series there were also three cases of delayed or imperfect resolution of the consolidated lung, and three cases of empyema, neither of which I have thought it worth while to report. With regard to cases of imperfect or absent resolution, it may be remarked, however, that if an example of this condition comes under observation for the first time at some considerable interval after

the original illness, valuable aid is given in diagnosis by the common circumstance that the consolidated area corresponds exactly to the superficial delimitation of one lobe of a lung on the surface of the chest.

There is also a point of importance in empyemata following pneumonia, that is, that at an early stage firm adhesions may unite the visceral and parietal pleuræ along the septâ between the lobes of the lung, and thus on the right side there may be a collection of pus over the lower lobe entirely shut off by adhesions along the interlobar septum from another smaller collection over the middle lobe. This happened in one of the above cases of empyema, in which after the pus had been evacuated from an empyema over the right lower lobe it was found necessary to do a further operation for a small collection of pus exactly corresponding to the superficial extent of the middle lobe, and completely shut off from the first one.

Pneumococcic Peritonitis.—Peritonitis is a rare complication of pneumonia, although, as is well known, severe pain in the upper part of the abdomen accompanied by great diminution in the respiratory movements in the same situation is common, and occasionally leads to errors in diagnosis. Though peritonitis is said to occur in pneumonia by direct extension through the diaphragm, it would seem more generally the result of a general pneumococcic infection, as appears likely in the following instances, which occurred in two sisters.

Winifred B., æt. 9, admitted February 7th. The patient when æt. 3 had several attacks of convulsions, but with this exception, although never robust, she had had no serious illness. On January 15th she went to school apparently in good health, but returned midday with a pain in her stomach, and vomited. The next day she was delirious, but this delirium soon passed off. During the next fortnight she suffered from severe paroxysmal pain in the abdomen, relieved by rubbing it. For the first week she was repeatedly sick, and the abdomen swelled and became hard. She had a troublesome, painful cough, the tongue was thickly furred, and an eruption of labial herpes appeared.

On February 1st the skin gave way over the umbilicus, and about two quarts of thin, greenish-yellow fluid was discharged, with great relief to the pain. Since that day there had been a slight discharge from the umbilicus. The bowels were moved

regularly throughout. On admission the child was thin and emaciated, with the remains of labial herpes about the mouth.

On admission, February 7th, the chest was small and badly formed. There was some dulness over the base of the right lung, with coarse râles in the axillary region, and over the left base bronchial breathing and some small crepitations. The heart was normal. The abdomen was distended, its walls rigid, and there was a feeling of resistance about the abdomen generally. It moved on respiration. There was a sinus, discharging pus, at the umbilicus. There was dulness over the front of the abdomen, but the flanks were resonant and there was no evidence of free fluid. The temperature was hectic, varying between normal in the morning and 101° at night.

The general appearance of the child and the physical signs in the abdomen suggested abdominal tuberculosis; examination of the pus from the sinus, however, showed no tubercle bacilli, but the pneumococcus was obtained in pure culture.

The blood gave erythrocytes 2,650,000, white corpuscles 15,000 to c.mm. A small incision was made just below the umbilicus, and a large cavity, shut off from the rest of the peritoneum, was discovered between the omentum and the anterior abdominal wall, from which about two pints of pus were evacuated. After the operation the temperature fell to normal, the sinus gradually closed up, and she left the hospital quite well five weeks later.

On March 2nd Bessie B., æt. 4, the sister of the above patient, was admitted, with the history that on January 24th, three days after her sister was taken ill, she developed a bad cold, with fits of shivering and several attacks of vomiting. During the next two weeks she was very ill with high fever, a bad cough, and pains in the chest and abdomen. The pains in the abdomen were paroxysmal, at times very severe, and were relieved by poultices. There was diarrhœa at first, but the bowels were afterwards moved regularly. The vomiting ceased after the first week. The abdomen became swollen, distended, and hard, and as the child did not get better, she was brought to the hospital.

On admission the child was pale and emaciated. There were a few scattered râles at the bases of the lungs, otherwise there were no abnormal physical signs in the chest. The pulse was 120; respiration 30; temperature 99.5°. The abdomen was much distended, measuring 22½ inches at umbilicus. It was dull all over, except in the epigastric region. There was a distinct fluid thrill. The skin around the umbilicus was red and dusky. The abdomen moved very little with respiration.

The day after admission Mr. Morton made a small incision between the umbilicus and xiphoid cartilage, and evacuated a large quantity of greenish yellow, fairly thick pus. On examination the organisms obtained gave the cultural characteristics of

the pneumococcus. The after history of the case was uneventful, the discharge rapidly diminished, and the patient left the hospital quite well twenty-five days later.

The interesting point is the occurrence of the same complication, and that an uncommon one, in two sisters, and also, in the first case, the close resemblance clinically to abdominal tuberculosis, at once cleared up by the discovery ot the pneumococcus in the pus.

Cases of Thrombosis of Vessels.—Thrombosis is a rare complication of pneumonia. In 27 out of 32 cases collected by Steiner the time of its appearance was during convalescence. According to Osler, it nearly always occurs in the femoral veins, and is still more uncommon in arteries than in veins.

Thrombosis of Left Superficial Femoral Vein. The patient was a strong, healthy collier, of temperate habits. He had a severe chill on December 24th, and on the 25th a rigor with pain in the left side of the chest, and was admitted into hospital on 26th with the signs of lobar pneumonia at the left base. The course of the pneumonia was uneventful, and terminated by crisis on December 31st. The heart's action was well sustained throughout ; there were no murmurs ; the pulse was good, varying from 80—96. A leucocyte count on the fifth day gave 45,000 to c.mm. The urine was normal. On the thirteenth day, when convalescence was apparently proceeding normally, the temperature, which had been normal for five days, rose to 99.5°, and he complained of pain in the left groin and calf, and the left thigh and leg swelled with great rapidity. The next day a hard, tender, band-like swelling could be felt along the course of the left superficial femoral vein, and a swollen vein on the calf leading up to this. There was no further constitutional disturbance, and no sign of any heart affection. Under the usual treatment pain and swelling gradually subsided, and by the end of January all evidence of the thrombosis had disappeared. He left the hospital well on February 3rd.

The most notable feature of the case is the rapid onset, and the equally rapid clearing up of the lesion, in marked contrast with the tedious course of most cases of thrombosis of the femoral vein. The cause was obscure ; there was no general infection, and no affection of the heart, whilst the well-marked leucocytosis in a moderately severe attack of pneumonia showed that the patient's resistance was good.

Thrombosis of Cerebral Vessels. J. H., æt. 25, had always enjoyed good health, but was said to have had a slight discharge

from the right ear before present attack. It was doubtful, however, whether this discharge was more than a little wax. He had felt ill for a week before, being obliged to give up work on October 29th. He was first seen by Mr. E. H. C. Pauli on October 31st, who found that his temperature was 102°, and that there was pneumonia of the lower lobe of the right lung. The crisis occurred on November 1st, and he was apparently doing well, when on November 3rd he had two slight rigors, an attack of general epileptiform convulsions, and his temperature, previously normal, rose to 101°. He vomited several times, and complained of headache. The temperature remained about 102°; there was no paralysis of any muscles, no recurrence of rigors, nor fresh symptoms, but on November 4th he became drowsy, and this gradually deepened into coma.

On November 6th, when I saw him, he was in a condition of moderately deep coma; he did not speak, but opened his eyes when shouted at. The pulse was 120; the respiration 32, irregular and often sighing. There was deficient resonance over the base of the right lung, and *redux* crepitant râles were heard here. The cardiac apex beat and area of dulness were normal, the pulmonary second sound accentuated and the first sound at the apex indistinct. Abdominal organs normal. The pupils acted to light, and were of moderate size, the right larger than the left. There was no localised paralysis; he could move his limbs; the arms were flaccid, the legs a little rigid at the knees. There was no rigidity of the neck muscles. The knee-jerks were present, not increased; the plantar reflexes were extensor in character; there was no ankle-clonus.

He could not swallow on this day; and there had been incontinence of urine and fæces for two days. The right ear contained wax, so that the drum could not be seen. The outline of the optic discs appeared a little blurred, but they were not hyperæmic, and there was no definite optic neuritis. On making a lumbar puncture, about 1½ ounces of perfectly clear, limpid fluid without any deposit were withdrawn.

In view of the difficulty of diagnosis in this case, the result of the lumbar puncture was especially important, as it enabled one to exclude meningitis, and probably intra-cranial abscess, a possible complication in view of the uncertain history of discharge from the ear. Thrombosis of cerebral veins was thought to be the most probable diagnosis.

The patient died the same evening. An examination of the brain was made at his home under considerable difficulties. Unfortunately, the result of this examination was negative, as the exact cause of the cerebral symptoms was not made out, but it was valuable as proving the absence of meningitis and intra-cranial abscess. Thrombosis of cerebral vessels is not always easily recognised, especially under the conditions in which the

examination of the brain was made in this case; and I think that this was the probable cause of death.

Apart from meningitis, paralysis of cerebral origin, generally hemiplegic, but sometimes monoplegic, occasionally occurs in pneumonia, either early in the disease or during convalescence.

In some of these cases of hemiplegia no gross lesion is found after death, and they are often attributed to the effects of toxins. In those cases in which there is a *post-mortem* lesion, it is generally softening from embolism or thrombosis. Probably in some cases reported as without lesion a patch of recent softening has escaped notice, which, if it is small, is quite possible.

General Pneumococcic Infection—Thrombosis of Vessels. The patient, E. C., was a horse-driver, æt. 23, who had never had a day's illness previously. The illness began with pain in the head on May 5th, followed on 6th by purulent discharge from the left ear, and on the 7th by severe pain in the left side of the chest, which interfered with respiration, and by vomiting. He was admitted to hospital on May 8th with well-marked signs of pneumonia of the lower lobe of the left lung. The heart was normal, the area of dulness not increased, and the pulmonary second sound well accentuated. Pulse 80; respiration rate 60; temperature 102.5°; leucocytes 18,750 to c.mm. Urine contained no sugar or albumin. Chlorides greatly deficient. He went on fairly well until the eighth day, when he had a rigor, and his temperature rose to 105°. It was noticed that his neck was swollen, and that there was thrombosis of the left median basilic vein extending into the basilic and median cephalic veins, the left forearm being swollen. The leucocyte count was now 25,700 to c.mm.; erythrocytes 4,000,000; hæmoglobin 90 per cent.

The following three days the temperature was normal, and the patient felt much better. On the twelfth day the temperature suddenly rose again to 105°. On this day a culture made from blood taken from the right arm showed a pure growth of pneumococci. During the next few days the patient felt better, in spite of the high range of temperature. Further, his tongue was red and dry, and his pulse, which had previously been about 68—72, now varied from 116—124. Leucocytes 21,800 to c.mm. The physical signs at the left base indicated that the consolidation was slowly clearing up in spite of the grave constitutional symptoms.

On the twenty-second day of the illness 5 cc. of antipneumococcic serum were injected. On the previous day he had had another rigor, and rise of temperature to 105°. The leucocyte count was now 19,375 to c.mm. A trace of albumin had appeared in the urine, which also gave a distinct band of urobilin.

On the twenty-fourth day, as the fever still continued high and the rigors recurred daily, a second injection of 5 cc. serum was given, with no appreciable effect, unless a fall of temperature from 103° to 101° be so reckoned.

There had been no extension of the thrombosis in the veins of the left arm, which remained limited to the veins in which it first appeared. No other thrombosed veins were detected elsewhere. There was no enlargement of the spleen that could be detected clinically at any period of the illness. The physical signs in the lungs remained stationary, the consolidation only partly clearing up.

On the twenty-eighth day of the disease the temperature was lower, at about 102°, but he was wandering in mind, looked haggard and emaciated, was sweating profusely, had partial incontinence of urine, and was obviously sinking. He died two days later.

The results of the *post-mortem* examination confirmed the diagnosis made during life. The thrombosis here was undoubtedly part of a severe general pneumococcic infection, and the gravity of the case was due to this latter condition, and not to the thrombosis, which could only be considered an incident in the illness, and not contributing to the lethal result.

Endocarditis.—*Double Pneumonia.* Maurice Y., æt. 19, engine cleaner. There was no history of any previous illness. For a few weeks the patient had suffered from an obstinate cold in the head, when on October 5th he was taken with pain in the right side of the chest, cough, fever and profuse sweats. He went to bed, and the next day the symptoms had increased, and he coughed up some rusty, tenacious sputum.

He was admitted on October 9th with well-marked signs of consolidation of the lower lobe of the right lung, and there was also dulness and bronchial breathing at the left base. The heart's apex was in the normal position, and the area of cardiac dulness normal. No murmur was heard. The temperature was 103°; pulse 90; respiration 30, shallow and irregular.

On October 10th the signs at the left base had increased, and now indicated extensive consolidation of the lower lobe of the left lung. A pleuritic rub was audible all over this lobe, and there was also well-marked pleuro-pericardial friction. The temperature was 102° on this and the following day, October 11th, when his pulse was 130, respiration 50. No cardiac murmur could be heard, possibly on account of the loud friction sounds which were present throughout. On this day he became suddenly worse after a violent fit of coughing, was deeply cyanosed, and died of heart failure.

Post-mortem.—There was extensive acute pleurisy over the whole of both lungs. Nearly the whole of the right lung was in a state of red, passing in places into grey, consolidation, and the lower lobe of the left showed red hepatisation. The heart cavities were dilated, especially on the right side. On the mitral valves were some old granulations, and in addition on these and on the edge of the valve segments were numerous recent small granulations. Scrapings of the cut surface of the consolidated

lung showed numbers of pneumococci, which were also obtained from the recent granulations on the mitral valve. The other cardiac valves were healthy.

Endocarditis is not a common complication of pneumonia. In the form of which the preceding case is an example it often goes unrecognised. In this case there was no evidence from the previous history or symptoms of the old existing lesion of mitral valve, and, further, there were no signs of the acute endocarditis supervening on this old lesion of the valve during the fatal illness. Any mitral murmur during this illness would have been effectually concealed by the loud friction sounds. The low temperature throughout such a severe attack of pneumonia is an unfavourable symptom, indicating poor powers of resistance on the part of the patient. Endocarditis in pneumonia generally affects the left side of the heart, and the pneumococcus is usually the active agent. As to its frequency, Preble, from an exhaustive analysis of over 20,000 cases, gives it as 1 per cent. of all and 5 per cent. of fatal causes. Pneumococcic endocarditis is frequently accompanied by meningitis, so that cerebral symptoms may form the predominant feature of the illness. Both this and the following case illustrate the well-established fact that cardiac valves which are the seat of previous disease are especially liable to be attacked by the micro-organisms of any subsequent acute infection.

Pneumococcic (Ulcerative) Endocarditis.—Charles M., æt. 47, a clerk, had scarlet fever as a child, and at the age of 22 was told by a medical man that he had heart disease. Except for occasional attacks of palpitation he remained well, and was able to do his work until April, 1900, when he was laid up with fever, cough, and pain in the right side, and was treated for a "liver attack." After this he got about again, but felt weak, and six weeks before admission took to bed on account of increasing weakness. He had a rise of temperature every evening, with profuse sweats between 3 and 6 a.m. There were no other symptoms, except a slight attack of hæmaturia three weeks before admission, and a rash consisting of bright red spots over the legs.

On admission he looked ill, and was anæmic and sallow. The temperature was 102°; the pulse 96, collapsing; respiration 26. There was a fading purpuric rash on the legs.

On examination the breath sounds were harsh, the lungs otherwise normal. The heart was much enlarged, the apex beat

being two inches outside the left nipple. There was a marked diastolic thrill at the apex, and a loud systolic murmur there. At the base there was also a rough systolic murmur, followed by a long soft diastolic murmur conducted down the sternum. All the visible arteries showed marked pulsation, and capillary pulsation was also observed. The urine contained a little blood and albumin. The liver was slightly enlarged. The spleen was distinctly enlarged, its tip being felt about two inches below the lower border of the ribs. There were no retinal hemorrhages, and the optic discs were normal.

The temperature chart shows the irregular course of the fever, and the high range to which it reached. There were profuse nocturnal sweats. The symptoms and physical signs made the diagnosis of malignant endocarditis obvious. Blood was withdrawn from the veins of the arm on three occasions, in order if possible to ascertain the cause of the infection, but no micro-organisms could be recovered from it. At this time the history of the beginning of the illness, when he was treated for "liver complaint," did not have the significance which it afterwards obtained in the light of the pathological findings. In the absence of evidence of the organism present, it was thought advisable to try anti-streptococcic serum. Three brands of serum were employed, one of them being a polyvalent anti-streptococcic serum, and were given in doses of from 10—30 cc. In all 480 cc. were injected, so that a thorough trial of the serum was made. Neither of them had any appreciable effect either for bad or good, except for occasional local redness, infiltration, and tenderness at the site of injection.

He grew steadily worse, and on October 15th slight general anasarca and ascites appeared. This gradually increased, and œdema of the ankles was marked on October 22nd.

On October 26th there was thrombosis of the superficial veins of the right calf, and a fresh petechial eruption appeared over the left thigh and knee. The albumin in the urine increased. About this date he became much weaker and delirious at night. The heart's action became weaker and very irregular. The murmurs persisted as at first.

On October 30th there were signs of a little fluid in the pleural cavities and congestion of the bases of the lungs. He died on November 4th.

Post-mortem.—There was a large infarct into the upper lobe of right lung. The lower lobe of the left lung was completely airless, dark red, solid, and granular on section. The heart was greatly enlarged; both ventricles much dilated. On the auricular surface and free borders of the tricuspid valve segments were large masses of fungating, soft granulations, which extended on to the chordæ tendineæ. The mitral valves were much thickened and contracted, but contained no granulations. The pulmonary

valves were normal. Aortic valves were largely destroyed, one segment almost entirely, and covered by large masses of granulation tissue. Scrapings from the valves, from the spleen, and from the pulmonary lesions showed abundant pneumococci, which were also stained in situ in sections made of the granulation tissue on the cardiac valves. The kidneys showed subacute nephritis, and there were a few small hemorrhagic infarcts in the jejunum.

There was no ground for the employment of anti-streptococcic serum in this case beyond the fact that a streptococcus is the most common cause of malignant edocarditis, and in the failure of all attempts to determine the exact organism present, and in view of the grave character of the illness, it was thought right to act on the hypothesis that this organism might be present. It shows, however, the fallacy of employing any serum in the absence of exact evidence of the kind of organism causing an infective illness. Looking back in the light of the *post-mortem*, the "liver attack" of the preceding April was probably a mild attack of pneumonia, but the history was too inconclusive for us to be able to come to any such conclusion during life.

Nephritis.—E. P., æt. 10. The patient's mother was taken ill with pneumonia on May 13th, and her father on June 2nd. The patient's illness began on June 6th with pain in the side, cough, fever, sickness, and diarrhœa. She did not sleep in the same room with her parents. She was admitted to the hospital on June 13th. She had not passed any urine for forty-eight hours before admission, and what was passed just before this period of suppression was the colour of blood. She was delirious at night.

On admission the temperature was 103°, pulse rate 104, respiration 42. The tongue was thickly furred. On examining the chest, there was pneumonic consolidation of the lower lobe of the right lung. The heart's apex beat was in the fourth space, and the cardiac dulness extended half an inch over the right border of the sternum. There were no murmurs. There was no enlargement of either liver or spleen. A leucocyte count gave 28,900 to c.mm. A few ounces of urine were passed, which contained a large quantity of albumin, much blood, and blood and epithelial casts.

On June 15th—16th (ninth and tenth days of disease) she was delirious, with a temperature rising to 104°, pulse 112, respiration 44. The abdomen was swollen and tense; the urine showed the same characters as above. Pallor of face and puffiness of lower eyelids were marked.

On the eleventh and twelfth days of the illness the crisis occurred, and on the following days the affected lung showed signs of resolution. Respiration fell to 24, and pulse to 72.

On June 20th (fourteenth day of illness) urine contained blood; epithelial, blood and leucocyte casts, with crystals of uric acid; there was still a large amount of albumin. Quantity passed, 32 ounces; urea in 24 hours, 26.5 grms. A leucocyte count on this day gave 28,000 to c.mm., and on June 26th 20,400 per c.mm.

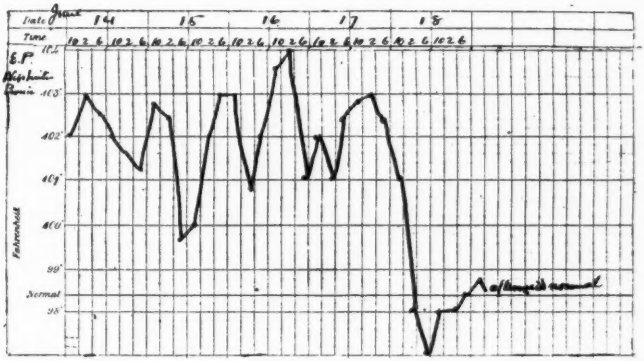
Between June 20th and 26th the daily quantity of urine was only 16 to 20 ounces; on the latter date its sp. gr. was 1020, with no blood, no casts, and only a small quantity of albumin. The lung continued to undergo normal resolution, and by July 9th the mischief there had cleared up. On this day examination of the urine gave: quantity 24 ounces; sp. gr. 1020; urea daily excretion about 15 grms. on a milk diet with one egg; a trace of albumin only; uric acid and calcium oxalate crystals, epithelial cells from urinary passages, and a few granular casts.

On July 17th and 24th the face was puffy, and there was still a trace of albumin in the urine; otherwise the child seemed well. At the end of this month the urine was passed in normal amount with a sp. gr. of 1020; it contained no albumin and no deposit, and she was discharged well on August 5th.

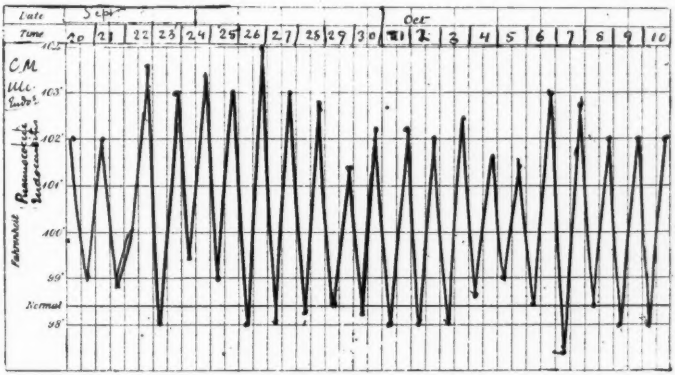
No pneumococci were found at any time in the urinary deposit. Nephritis is a very rare consequence of pneumonia. This is the only case I have ever seen. I think there can be no doubt of cause and effect in this case. In so completely and quickly clearing up, it followed the usual course of nephritis in acute infective disease. The case is a good instance of *infective* pneumonia, and in the infective form the disease is well known to be more severe, more apt to be a general infection, and therefore to lead to complications.

Pneumonia, Empyema, Arthritis.—Victor R., æt. 8, previously healthy. On April 16th, 1906, patient fell into a pool of water; on the 17th pains in the right hypochondrium and side of chest, followed on 18th by cough and pains in the left arm.

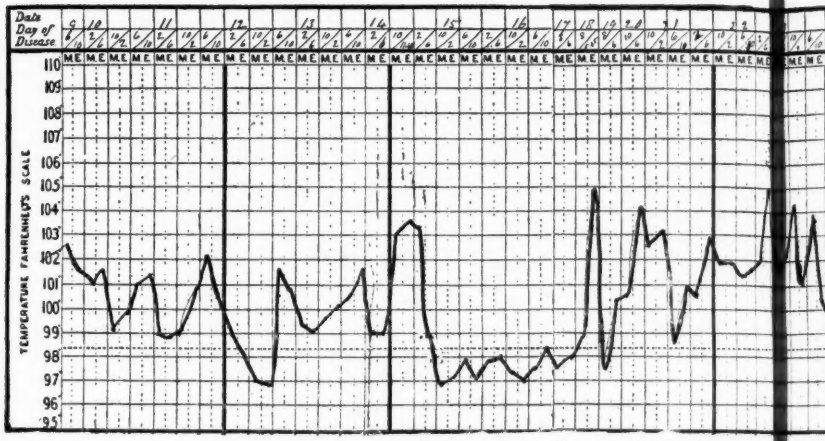
On 21st he was admitted into the hospital with a temperature of 102°, pulse 120, respiration 34. On examining the chest there was dulness, deficient air entry, a few moist crepitations, and increased vocal resonance over the base of the right lung. The other organs were normal. The left elbow-joint was swollen, red, and painful, and there was some fluctuation in the joint. On April 23rd there was a patch of bronchial breathing at the lower angle of the right scapula, otherwise the lung signs remained the same. The swelling of the elbow-joint also remained stationary; the pain was relieved by placing it upon a splint. The signs of



Case of Pneumococcic Nephritis.



To show range of temperature in case of Pneumococcic (Malignant) Endocarditis.



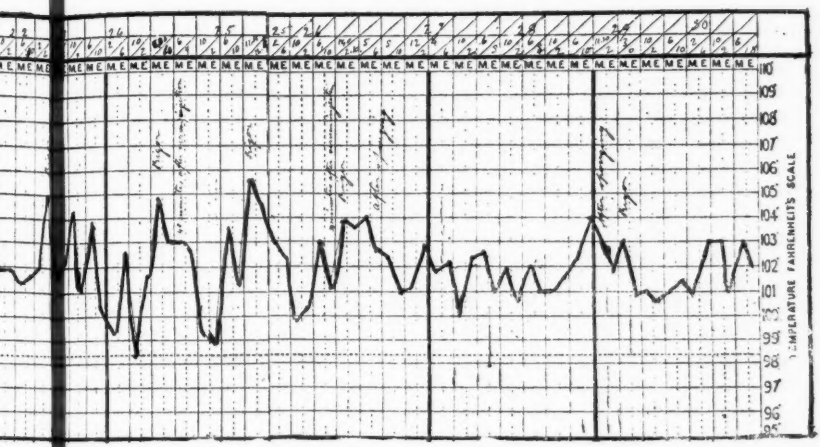
Temperature Chart. General Pneumonic In

an empyema having developed, on May 4th a portion of the eighth rib was excised, and a moderate quantity of thick yellow pus evacuated. The pus contained numbers of pneumococci. At the same time two incisions were made into the elbow-joint, but no pus found. On May 14th there was no pain in the elbow, and the swelling had much diminished, but the joint was stiff, with very little movement of flexion or extension, the former not beyond a right angle.

On May 17th the condition of the left elbow-joint still suggested the presence of pus, but none was found. The muscles of the arm were now much wasted, more especially the triceps. On the next day massage of the limb and gentle passive movements of the joint were begun. A curious feature of the case was the appearance of four or five large pustules on the left ankle and foot, which gradually died away, to be succeeded by a fresh crop on June 8th, which lasted until June 20th.

Another feature was that, although the empyema was opened and drained freely, and did well, the discharge gradually lessening, and there being no evidence whatever of retained pus, the temperature remained of a hectic type, ranging between 99° and 102°, for a fortnight after the operation before it returned to normal.

For the rest it is sufficient to say that the empyema wound healed about the middle of June, leaving a very good result as regards expansion of the lung, and that the swelling and stiffness of the joint gradually improved, so that when he left the hospital in July all movements were perfect and the joint appeared normal.



Pneumonic Infection. Thrombosis of Vessels.

THE VALUE OF COMPRESSION OF THE AORTA IN THE TREATMENT OF POST-PARTUM HEMORRHAGE.

BY

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SINCE Mr. Stanmore Bishop[1] and Dr. Le Page[2] recently emphasised the value of compression of the aorta in post-partum hemorrhage, much discussion has taken place as to its practical utility. The following case occurred in private practice, and is of interest if only in regard to the value of compression of the aorta :—

Mrs. L., æt. 22 years. Third pregnancy. Previous pregnancies normal. The last child died at birth, owing to the umbilical cord being round its neck, proper assistance not being available.

The patient was well nourished and free from organic disease, but was of a highly neurotic temperament. There was no history

[1] *Practitioner*, 1906, lxxvii. 145. [2] *Brit. M. J.*, 1907, i. 185.

of hæmophilia. No hemorrhage had occurred during pregnancy.

The present labour began on March 3rd and was preceded by sharp uterine hemorrhage shortly before the "pains" began. The patient was first seen at 9 p.m., and the state of affairs then was as follows: feeble and irregular labour pains, slight bleeding, os dilated sufficiently to admit one finger, lower margin of placenta overlapping os, position of fœtus normal, pulse normal, general condition of patient good.

At 11.30 p.m. on the same day profuse hemorrhage occurred. At this time labour pains were strong and frequent. The os admitted the tips of three fingers. The pulse rate had risen to 120. It was decided to turn and deliver the child. Under chloroform the os was gradually dilated with the fingers and hand, and the child turned and delivered. Delivery took place at 12.45 a.m., the child being alive and full term. Very little bleeding occurred during dilation and version, and ceased as soon as the first leg was brought down through the os. Immediately on delivery of the child sharp bleeding followed, and the uterus then began to show signs of inertia. The pulse rate had risen to 130 when the child was born, and with this further bleeding soon reached 140. Manual compression of the aorta, however, immediately stopped the bleeding, and with returning uterine contractions the placenta was expressed, and without difficulty, half an hour after delivery of the child. The uterine cavity was then explored and emptied of a few blood-clots. There were no placental remains. The cervix was not torn through. After the uterus was emptied, and a drachm of ergot and some nourishment were given, a little friction soon succeeded in getting the uterus firmly contracted. The general condition of the patient had, however, become very serious. Her pulse had risen to between 140 and 150, and was threadlike. She was very pale, and complained of coldness, faintness and nausea. She was quickly packed with hot-water bottles, covered with blankets, and her head lowered. As soon as nausea became less, more nourishment was given and retained. Compression of the aorta was relinquished soon after the uterus had become firmly contracted.

Three hours after delivery there was marked improvement in all the symptoms. The pulse had dropped to 120, was much stronger, and there was no faintness or nausea. The face had regained some colour, the patient was warm and had taken about half a pint of nourishment and retained it all. She complained chiefly of thirst and tiredness. The uterus was still firmly contracted, and no bleeding had occurred since compression of the aorta had been discontinued.

At 10 a.m. her condition again became very serious. Bleeding had returned shortly before this, and the uterus had become large and flabby. Alarming symptoms of shock were now present.

The pulse at the wrist was scarcely perceptible, and too rapid to be counted. The patient complained of being cold and faint, her body being covered with clammy sweat. She soon began to get very restless, and to throw her arms about and cry for air. She then suddenly became cyanosed, had a convulsion and became unconscious. An hypodermic injection of strichnine was immediately given, and in a few minutes consciousness returned, but lasted only momentarily, the patient relapsing into a comatose condition, her pulse now disappearing at the wrist and respiration ceasing. The uterus, which extended above the navel and was full of blood-clots, was in the meantime emptied and compressed through the abdominal walls. There was no response to stimulation, and no time was lost in applying pressure to the abdominal aorta. Respiration had just stopped when the aorta was compressed, and this blood-vessel could be felt pulsating feebly. Pressure was applied with the clenched fist through the abdominal walls and the uterus.

Respiration began again in less than a minute after the aorta was compressed. Subcutaneous transfusion of normal salt solution was then begun. While transfusion and compression of the aorta were being carried out, the patient's legs were elevated and firmly bandaged from the insteps to the groins, and a hypodermic injection of "ernutin" was administered. The head of the patient, already low, was further lowered by elevating the foot of the bed on two chairs. A pint of saline fluid was rapidly transfused beneath the skin of the inframammary region on one side, and a similar quantity in the same region of the other side. The site of injection was then changed to the right flank, as both inframammary regions were bulging with fluid, owing to rapid transfusion and slow absorption. The aorta began to fill out when about a pint of fluid had been absorbed, and before two pints of fluid had been absorbed the patient regained consciousness, and the aorta could be felt pulsating strongly against the fist. Coincidently with the rise in blood-pressure, improvement in all the symptoms took place, the pulse reappearing at the wrist when between two and three pints of fluid had been absorbed. The patient then complained of being hot and thirsty, and soon began to perspire. As soon as consciousness was fully restored, friction and compression were applied to the uterus, and the relaxed organ then responded quickly, although these measures previous to compression of the aorta failed to produce contraction. Pressure was then applied through the abdominal wall directly on the aorta. For five hours life ebbed and flowed in a most remarkable way. During the whole of this time compression of the aorta was kept up continuously by my assistant and myself. After the pulse had reappeared at the wrist transfusion was carried on intermittently, as the tendency to relapse from shock threatened. At 6 p.m. the state of affairs had materially

improved. The pulse had got down to 130, and was fairly full. The uterus was firmly contracted, and had shown no tendency to relaxation again. Not a single drop of blood had escaped *per vaginam* since compression of the aorta had been applied, and the uterus had been finally got to contract, and this, notwithstanding the fact that the uterus had been repeatedly squeezed to ascertain whether any blood was escaping *in utero*. The patient complained now chiefly of pain in her legs due to constriction of the bandages, and also of great thirst and weariness. Since she had become conscious about 6 oz. of nourishment had been taken, and this had all been retained. Transfusion was entirely stopped at 6 p.m. During five and a half hours between ten and twelve pints of fluid were transfused. The needle was not removed from the flank until transfusion was finished, the receiver full of fluid being kept at the same level as the flank when transfusion was temporarily suspended. After removing the needle a piece of adhesive plaster was placed over the wound, about two pints of fluid being still unabsorbed when the needle was removed.

The legs of the patient were kept suspended for about half an hour altogether.

Between 11 and 12 p.m. the condition of the patient was eminently satisfactory. The pulse had got down to 100, and was strong and fairly full. The uterus was firmly contracted, and the diaper, which had been applied immediately after compression of the aorta and emptying of the uterus at 11.30 a.m., was unsoiled. All saline fluid had been absorbed. The patient had slept, taken and retained all nourishment, and had regained some colour. She complained, however, of great pain in her legs and of insatiable thirst. Otherwise she said she felt altogether better. The bandages were then very carefully removed, and save for pain and throbbing in her legs, no ill effects followed removal. The legs had been kept warm by hot-water bottles; the foot of the bed was still kept elevated. The patient was left about an hour after removal of the bandages, and from every point of view was in a very satisfactory condition.

What promised to be a remarkable recovery from post-partum hemorrhage and shock terminated unfortunately in a most unexpected and tragic manner. At 2 a.m., the patient craving for drink, and finding she was refused more than the prescribed quantity, watched her opportunity, and the nurses leaving her bedside for a moment, she sprang out of bed for some water on a table near, and fell in a collapsed state on the floor. In spite of everything, she soon succumbed to heart failure. At the time of death the uterus was still firmly contracted, and less than a tablespoonful of blood had escaped *per vaginam* since she was seen at midnight.

Remarks.—Although this patient died, the great value of

compression of the aorta was well illustrated. The immediate cause of death was undoubtedly heart failure consequent on the exertion in getting suddenly out of bed, and sudden heart failure is by no means uncommon, even after far less hemorrhage and shock than occurred in this case. Bleeding had ceased for nearly fourteen hours before the patient died, and at the time of death no further bleeding took place. Shock also was being rapidly recovered from.

It is quite obvious in the circumstances attending this case, at the time when compression of the aorta was adopted the second time, that none of the methods of treating atonic post-partum hemorrhage advocated in text-books could have been relied on here for rescuing the patient from immediate death. The patient must have died before plugging of the uterus or the application of perchloride of iron could have been performed, even if these means would eventually have stopped bleeding, a result which admittedly is not always obtained. Compression of the uterus itself in the manner advocated by Dr. Herman[1] would, if carried out continuously for some hours, have prevented further bleeding. But compression of the uterus by this method (which is undoubtedly the best) cannot be carried out continuously for any great length of time, a fact which Dr. Herman himself admits.[2] Further loss of even a small quantity of blood, as must have occurred in changing compression with an assistant and in again changing when the latter became tired, was a matter of vital importance during at least the four first hours that the aorta was compressed. During this period the patient repeatedly relapsed in spite of no bleeding taking place, and the uterus also relaxed from time to time. Had compression of the uterus been employed, unless the compression had taken place continuously for about four hours, further bleeding would have occurred, and the patient would have died very quickly.

Although immediate and continued control of hemorrhage was a *sine qua non*, prompt treatment of collapse from post-hemorrhagic shock was of equally vital importance. Plugging of the uterus, the injection of a styptic, compression of the uterus, not any of these would have remedied collapse quickly enough.

Compression of the aorta not only immediately stopped all

[1] *Practitioner*, 1907, lxxviii. 445. [2] *Difficult Labour*, 1901, p. 336.

bleeding, but also immediately influenced shock by cutting off the blood supply in the lower extremities, and so increasing the amount of blood in the heart, lungs and nerve centres. Elevation of the pelvis probably contributed greatly in this case. By this procedure, not only was venous bleeding controlled, but the blood supply to the vital centres was also maintained. The *vis a tergo* in the arterial circulation being also diminished was an important factor in helping to prevent hemorrhage after compression of the aorta ceased. Saline transfusion subcutaneously no doubt assisted materially, but without compression of the aorta would have been useless, as even with the bleeding stopped absorption was at first extremely slow, and could not have occurred at all had the bleeding not been instantly checked. Intra-venous injection of saline fluid might have succeeded, but retention of blood-plasma was of far greater value in restoring energy than would have been the introduction of mere salt solution.

Of the objections raised to compression of the aorta in the recent discussion, all had to be considered in this case with the exception of obesity. The other objections put forward were the intervention of a large uterus, inability to maintain efficient compression of the aorta,[1] damage of the sympathetic nervous system, compression of the vena cava,[2] and injury to the uterine muscle from cutting off its blood supply *via* the uterine arteries.[3]

Although this patient was not obese, she possessed unusually well-developed abdominal muscles, and in addition was highly neurotic. When the hand was placed on the abdomen to feel the uterus, previous to giving the anæsthetic, it was impossible to define the outline of the uterus properly, so great was the rigidity of the abdominal muscles. The contrast after delivery, even after the effect of the anæsthetic had disappeared, was remarkable, and was still more so when death was impending. There was, therefore, no difficulty whatever in reaching the aorta when this became necessary, although the patient when she became conscious strongly resented the proceeding. The intervention of a large uterus did not in the least prevent compression being

[1] Fitzgerald, *Practitioner*, 1906, lxxvii. 652.
[2] Duke, *Brit. M. J.*, 1907, i. 290. [3] Fitzgerald, *loc. cit.*

properly carried out, the uterus being as soft as "wet wash-leather." The fact that my assistant and myself were able to maintain efficient compression for five hours continuously is sufficient proof of the ability to maintain the necessary force long enough for effectually controlling hemorrhage. In changing compression the fist to be applied was always firmly applied on the blood-vessel below the other fist, and by this manœuvre no blood was lost in changing pressure. Injury to the sympathetic nerves, and compression of the vena cava were avoided in the one case by changing the point of pressure from time to time along the available part of the aorta, in the other by swaying the fist sideways before finally compressing the aorta. So far as could be discovered, no harm resulted in either direction.

In regard to the alleged injury to the uterus in interfering with its blood supply, quite enough blood was carried by the ovarian arteries for the nutrition of the uterine muscle, as the uterus contracted and retracted not long after compressing the aorta, and continued to do so up to the time of death. The fact that no bleeding occurred in spite of the blood-flow in the ovarian arteries continuing, proves the unimportance of considering these vessels as contributing to hemorrhage after labour.

EIGHTY CASES OF LUPUS VULGARIS.[1]

BY

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ONE of the most difficult problems in medicine is the correct estimation of the value of any new method of treatment which is not absolutely specific. Not only is enthusiasm liable to run riot at the incidence of a series of successful cases, but the reverse may also occur, and undue depreciation of the value of a useful method be engendered by an initial series of *un*successful cases.

[1] Read before the Bristol Medico-Chirurgical Society, December 12th, 1906.

In attempting to make a personal estimate of the value of radio-therapeutic methods in the treatment of lupus vulgaris, several difficulties presented themselves at the offset.

It was claimed for the Finsen Light treatment that the rays which were curative in property were those rays of short but rapid wave-length in the blue and violet, and beyond the violet end of the spectrum. But it was soon shown that the penetration of these rays was of the smallest character, while I myself have shown that rays of the less therapeutic value in the spectrum pass with ease through the body. The first difficulty I met with was in choosing the cases which would be best suited for the treatment, out of the numerous cases which presented themselves at the department. For the most part these were of the most unpromising nature for any new method of treatment—the subjects of old-standing disease, in some cases over forty years in duration, with a history of numerous operations, many of whom presented deep and extensively scarred lupus of the integument with free involvement of mucous membranes.

Secondly, it soon became obvious that there were nearly as many types of the disease as there were patients to suffer from them. And success or failure in one case could hardly be claimed as experience in the next.

Thirdly, the patients were largely of the " night-bird " order, creeping out after night-fall or swathing up their disfigurements in light-proof veils and wraps, leading thus an unhealthy and unnatural existence, often in great want owing to the inability to obtain even the scantiest livelihood.

As an instance of how this factor has a bearing on the estimation of value of the treatment, I may cite the case of a man who was obtaining the scantiest livelihood by selling newspapers—his face always hidden under a scarf—poor to destitution, but independent. I attempted his relief by means of radio-therapy with no good result. Some years after I happened to meet him, and urged him again to come for treatment. He came, and in order to do so, went into the workhouse, and obtained there better diet, regime and attention. Instantly we obtained a most promising effect, and the amelioration is continuing in a most remarkable way.

Although aware of these difficulties, I thought that I would at first restrict the treatment of the exterior at any rate to the radio-therapeutic methods alone, and attempt to estimate the value *per se* of the radio-therapeutics as a specific. If some cases seem to have been a very long while under treatment, it must be remembered that until quite recently no other treatment was used in conjunction with the light, that many of these were old scarred cases, and some of them cases on which the Finsen treatment was merely wasted.

The first case of lupus was treated in the department in December, 1901. Up till the end of 1905 we have a record of over eighty cases of lupus. Besides these there have been not a few instances of other manifestations of cutaneous tubercular disease, such as scrofulodermia, tubercular abscesses, verruca necrogenica and the allied verrucous condition on the hands of butchers, which is in all probability tubercular. These might very well form a separate note, since they have been extremely ready to respond to radio-therapy, more so than lupus vulgaris, but I have omitted them from this collection.

The variations in type of lupus are numerous but not always well defined, one type merging into another according to the reaction of the patient to the disease. I have divided off the following :—

1. Extensive erythematous forms, spreading widely and rapidly at intervals, sometimes more or less symmetrical in position, depending upon unknown factors for their delimitation. Perhaps nerve areas are roughly mapped out ; certainly the hairy areas seem to offer great resistance.

2. Nodular forms, with very slight erythema occupying one or more areas, with no suggestion of nerve area or symmetry ; no tendency to ulceration, and of very slow growth.

3. Hypertrophic forms (lupus exedens), with high-raised granulation tissue, of rapid development and spread.

4. Ulcerative forms, where ulceration is the chief feature of the case, not merely an incident in the case.

5. Verrucous forms, indolent in growth, very chronic and resistant.

6. Oedematous forms, with lymph-stasis out of all portion to the amount of disease, but the cutaneous exanthem showing definite " apple-jelly " nodules.

7. Sclerodermic forms.

As I have said, these types may overlap, it being difficult to classify some cases under any of these headings. But in general the case is true to its own type, whatever that type may be. If it is hypertrophic on the face, it will be hypertrophic on the hand ; if nodular on the thigh, it will be nodular on the ear ; and so on. It is rare to find also lupus in one patch while there is some indefinite scrofulodermia elsewhere. It would appear that the type of disease is the expression of the tissue resistance rather than the virulence of the strain. At the same time it is quite rare to find phthisis in a lupus patient. It is present in a very chronic fibroid form in three out of our eighty cases—3.75 per cent. Other forms of tubercle may be present, though not commonly. Tubercular dactylitis in three cases—3.25 per cent. Hip-disease (old) in one—1.25 per cent. Enlarged glands in several.

Lacrymal dacryocystitis and abscess is fairly frequent when the nasal mucous membrane is attacked. It is of interest to note how many patients with lupus of the face have attending infection of the nasal mucous membrane. Indeed it is not infrequent for the patient to admit having had a liability to epistaxis and coryza or blocked nostril for a long period before lupus has developed externally.

The various types behave differently to the radio-therapeutic measures. The extensive erythematous forms are very difficult to treat. It requires long-continued patient care to make any headway at all with the light, and with the X-rays many and frequent applications are necessary before the erythema dies away and scar tissue is revealed.

As soon as this paling of the area is observed, it will be noticed that broad bands of white supple scar tissue leave between them islands of erythematous material, which gives the diffuse staining characteristic of this kind of lupus through the diascope. The X-ray treatment must be continued for a long while after this,

and it is this feature which opens up an avenue of danger in persons past the middle age. Long-continued X-ray treatment in a case where scarring is extensive, and is cutting off islands of inflammatory material, may be followed by the development of carcinoma. It is recognised that carcinoma may develop on an untreated lupus, the reparative processes of nature pursuing the same course, but there is obviously a danger of raising these undesirable statistics by the *too* rapid encouragement of this healing process. Epithelioma developed on the lip in one very extensive case of this form of the disease, and in spite of extensive removal, which Mr. Hey Groves was good enough to undertake, the patient went from bad to worse and died.

It is jumping to conclusions to state with any degree of definiteness that this was produced by the ray-treatment, but having watched the case for years there is a haunting conviction that the treatment was a contributary cause.

Perhaps one attempted to do too much. In the initial stages of the treatment the light produced a great amelioration of his distressing condition. Later, as the light did not seem to be curing any part, I added the X-rays. Improvement and the scarring of large areas was soon observed, and I was tempted to pursue the disease wherever any recent erythema showed itself, with this disastrous result.

On these cases an advancing edge of more resistant lupus is seen as a rule. In this edge most of the recurrences will be seen in cases which have done well, and it is necessary to treat again and again until no fresh developments arise. On this account it is impossible to call a case cured until years have elapsed.

The nodular forms without much erythema do well with the light as a rule. In some cases, however, the good results are slower to arrive than in others, and I have observed that the factor of general health is a large one. It would seem that the reaction to the disease in these cases is not sufficient to produce the desirable erythema, which is undoubtedly reparative. Even when this is artificially supplied the leucocytic invasion is not sufficient. One case of this order was of a very delicate strumous type, while a second had phthisis. In the first relief of the disease was

produced with some tendency to recur in spots, in the second very little could be done. One spot only seems to have disappeared, while others were removed surgically, being in places where the scars would not show. In cases where the general health is satisfactory what erythema is present at first dies away on the subsidence of that caused by the treatment, and the nodules pale till they are no more than the colour of freckles, and many disappear from view altogether. But it is not infrequent that nodules are left behind, inveterate and persistent, and which only the longest course of treatment might be expected to relieve. On the other hand, the nodules are clearly demonstrated as the focus of the disease, and the simple and not very painful process of stabbing them with a pointed match-stick dipped in pure carbolic acid will get rid of them, even if it leaves behind small pitted scars. This is the course I adopt now when I have to deal with any of these inveterate and chronic cases. It may certainly be claimed for radio-therapy that it decreases the amount of the area to be treated with caustics eventually, while in many cases of these inveterate forms it relieves without resort to caustics at all.

In the hypertrophic forms it is seen at once what an enormous advantage radio-therapy can offer. With the large masses of granulation tissue exuberant, foul and greatly disfiguring, the temptation to remove the whole with the sharp spoon is almost irresistible. If this is performed great loss of tissue with irregular deep scarring will occur, whereas the X-rays soon have a marked effect upon the granulations, levelling them down to the skin, and leaving a scar in no way particularly noticeable except for occasional development of telangiectatic vessels, which have in a few cases made a permanently red colouration of the scar. This is possible after any prolonged X-ray treatment, and not dependent on the kind of disease treated.

After the X-rays have reduced the hyertrophied granulation masses, there may appear ordinary lupus nodules which persist. These are not as a rule difficult to deal with, either by continuing the rays or with the light lamp.

The good effect of a course of the rays will continue for a long

while after the rays are stopped. It is my practice to go very slowly in these cases, to prevent if possible the development of telangiectases by too rapid treatment. The result, as proved by time, seems to be very satisfactory as far as my experience goes; but if ever any part begins to develop, for instance at the edge of a patch or in a fresh part of the body, the production of granulation material is extraordinary in its rapidity and amount.

In the ulcerated forms we have again an opportunity for the X-rays to show an advance in therapeutic methods. Large, deep and very chronic ulcers yield to their influence without added loss of tissue or the contractures which might be expected. Not only do they heal, but they remain healed. In very extensive cases of the disease, where little else could be accomplished, the complete healing of the sores has led to comfort and material well-being of the patients. This good result can be obtained on the mucous membranes as well as on the skin, provided the parts can be reached by the rays without an undue exposure of nearer parts. It is not advisable to treat the recesses of the nose with the rays from an X-ray tube, as the tip and alæ of the nose will show evidences of an overdose before good results can be obtained internally. The common site of perforation and ulceration within reach of the finger can be so treated and effectually. For internal use X-rays can be applied by means of high frequency vacuum tubes, which emit X-rays. I have tried this method with only partial success.

In verrucous forms there is a hard, warty growth of the corneous layer over each of the lupus nodules. The rays cause the corneous layer to shed, and the nodules exposed thereby are more easily dealt with, by other methods if desired, or by the continuation of radio-therapy. Some very good results have occurred from X-rays alone.

In œdematous forms the X-rays cause the œdema to subside, and in this particular I think they supersede all other forms of treatment. Occasionally the lymphstasis is out of all proportion to the apparent amount of lupus present. The lips, if involved, hang pendulous and unprotected; they ulcerate and become useless. The leg, if involved, looks as if the subject of

elephantiasis ; but the œdema subsides and lupus nodules, which previously were not obvious, become visible and can be treated.

In sclerodermic, hard and indurated forms, the X-rays soften the induration, heal any incidental ulcers, and, as far as my experience goes, the results are lasting.

Conclusions.—For the most part I have obtained better results with the X-rays than with light ; but I believe that the Finsen lamp is the better radio-therapeutic agent for nodular lupus, while the X-rays are better for hypertrophic, ulcerated, verrucous and sclerodermic forms.

Recurrences occur in this as in other treatments, and the cases must be jealously watched at intervals after they are discharged relieved. But it can be claimed that there is not the loss of tissue attendant upon the other treatments, and consequently not a tithe of the disfigurement resulting. On the parts of the body beneath the clothing, where possible, excision is probably the best available as well as the most rapid method. On the parts that show, radio-therapeutic measures, supplemented by carbolic acid puncture if required, will give slow but the best results.

ANALYSIS OF EIGHTY CASES OF LUPUS VULGARIS.

1.	Patients in whom spots have been relieved, with no recurrence in situ, though lupus may be present in mucous membranes, or on other parts of the body	20	= 25%
2.	Patients discharged with great improvement ..	15	= 18.75%
3.	Discharged with some improvement (ulcerations healed, &c.)	9	= 11.25%
4.	Improved ; still under treatment	11	= 13.75%
5.	Ceased treatment prematurely	8	= 10%
6.	No improvement	6	= 7.5%
7.	Recurrence after apparent relief	3	= 3.75%
8.	Fresh development in vicinity of healed patch	2	= 2.5%
9.	Dead	6	= 7.5%

NAME.	AGE.	FIRST TREATMENT.	LAST TREATMENT.	NATURE OF TREATMENT.	POSITION.	RESULT.	NOTES.	CLASS.
E. H.	21	Dec.,'01	X-rays, Mar.'03 ac. lac. Apl.,'03	Light, examined by X-rays later. Ac. lactic gums and m.m.	Nose, upper lip, cheeks, nose ulceration, contraction, ulceration of upper lip, gums, palate	Relieved	Nodular type, no previous suggested treatment. New nose by Mr. Groves	I.
W. R.	17	Dec.,'01	Jan.,'04	Light and X-rays	Nose, alæ and tip; right hand, back, left arm by elbow, left foot	Relieved mainly	Erythematous type mainly. Now returned with a patch on elbow. Had a burn on foot	VIII.
F. B.	20	Dec.,'01	Feb.,'02	Light only	Left cheek, patch size of a sixpence	Relieved	Nodular; one year duration only	I.
W. H.	15	Dec.,'01	July,'04	Light, few X-rays	Face, entire; ears, neck, extending to chest and shoulders	No improvement	Ten years duration. Erythematous type; couldn't tolerate X-rays	II.
V.H.	19	Dec.,'01	Feb.,'02	Light only	Tip of nose, m.m. in nose	Well, except ulceration internally	Nodular	I.
M.H.	40	Dec.,'01	1906	Light, X-rays, ac. carb.	Nose, face generally	Great improvement with disfigurement	Nodular; a very long-standing, deep infection	II.
E.H.	27	Dec.,'01	Jan.,'06	Light	Face, nose, lip	Improved, but no permanence in some patches	Phthisis, nodular; pitting and scarring	III.
E.H.	52	Dec.,'01	Mar.,'05	Light	General on face ..	Dead of carcinoma mammæ subsequent to operation		IX.
E. M.	7	Jan. '02	Nov.,'06	Light mostly, some X-rays	Right cheek, left thigh	Healed face and thigh, recurrent	Nodular since infancy; recurrence on edge of scar of thigh	VII.
J. D.	53	Jan.,'02	Oct.,'02	Light	Bridge of nose	Healed, but not sound in 1903	Erythematous	III.

NAME.	AGE	FIRST TREATMENT.	LAST TREATMENT.	NATURE OF TREATMENT.	POSITION.	RESULT.	NOTES.	CLASS.
J. W.	32	Jan.,'02	Oct.,'06	Light and X-rays	Whole face ; neck to chest	Dead of carcinoma, angle of mouth, after operation by Mr. Groves for removal, and plastic to lip	Erythematous variety, very long duration and extensive. Improved under treatment considerably	IX.
E. B.	56	Jan.,'02	July,'06	Light and X-rays	Face, entirely ; ears	Improved, but fails to check development	Nodular and pigmented ; very deep. Nose plastic by Mr. Greig Smith, affected now	III.
A. L.	37	Jan.,'02	Apl.,'04	Light, X-rays, radium	Right cheek, extending over nose	No improvement	Erythematous ; absolutely nothing was done for this case by any form of treatment. 25 years duration	VI.
M. B.	19	Jan.,'02	Jan.,'04	Light, X-rays ..	Tip, and right side of nose, right cheek, left upper lip	Relieved	Hypertrophic	I.
M. G.	19	Jan.,'02	Nov.,'02	Light	Beneath chin, and jaw both sides	By letter from S. Africa, "keeping well"	Nodular	II.
M. B.	31	Jan.,'02	Recent	Light	Left cheek, right chin, eyelids	Recrudescent, occurs in spots	Nodular ; many operations previously	IV.
B. B.	36	Jan.,'02	May 7th '02, returned during last few days	Light no good ; 18 X-rays	Huge ulceration of alæ, septum and upper lip	Well within reach of rays, but m.m. beyond uncertain	Left prematurely, but good effects went on for a long while afterwards	IV.

J.E.B.	70	Feb.,'02	Jan.,'03	Light	Left cheek and nose	Improvement	7 years' treatment. Erythematous ; left prematurely owing to illness at home	V.
P. R.	20	Apl.,'02	May 30, 1903	Light, X-rays, ac. lactic m.m.	Right cheek, upper lip and gums	Well	Dactylitis operation	I.
J. L.	17	Mar.,'02	Jan.,'03	Light, no imprvmt.	Whole face	..	Hypertrophic	IV.
		Feb.,'05	Present	X-rays	Neck	Great improvement ..	Great destitution at first ; Jan. '03, no improvement ; then workhouse, Feb., '05	
W. P.	9	Apl.,'02	May,'03	Light	Face	Some improvement ..	Great improvement. Left prematurely ; nodular type	V.
H. S.	4½	Apl.,'02	Aug.,'04	Light only	Right cheek	Two small recurrences ..	Nodular	VII.
		Apl.,'06	July 7th 1906					
E. L.	40	Apl.,'02	Mar.,'05	Light, radium, X-rays	Whole face	Practically well	Great scarring through operation ; ulceration, destruction of nose, great disfigurement	II.
R. A.	46	Apl.,'02	Sep.,'03	Light and X-rays	Nose, m.m. ; whole face	Improvement	Ulcerations 12-14 yrs., operation 11-12 times, attended irregularly	VI.
G. F.	14	Mar.,'02	June,'04	Light, X-rays, ac. lactic	Tip of nose, extending from m.m., involved heavily	Well externally, but internally not	Nodular, externally ; m.m. involved to back of pharynx	I.
M. W.	23	Feb.,'03	Jan.,'05	Light, ac. lactic, int.	Tip of nose, m.m. nose	Cured externally, not internally ..		I.
S. N.	59	Mar.,'03	Sep.,'03	Light only	Both cheeks and nose 13–14 patches	As bad as ever, Nov., '06	Patches scraped ..	VI.
O. L.	17	Mar.,'03	Apl.,'04	Light. Permang. of pot. painting ; to increase Rn. X-rays at end	Thigh, neck, ear ..	Some improvement when last seen	No answer to card	III.

NAME.	AGE	FIRST TREATMENT.	LAST TREATMENT.	NATURE OF TREATMENT.	POSITION.	RESULT.	NOTES.	CLASS.
C. P.	65	Apl.,'03	May,'04 4 X-rays, May,'05	Light, X-rays at end	Left side face, under chin	Improvement	Scarring variety.. ..	III.
E. W.	36	Apl.,'03	Aug.,'03	Light only (Pyrogallic ac. carbol. to increase Rn.)	Left forefinger	Well	Well Nov., 1906 ..	I.
E. B.	57	May,'03	Mar.,'05	X rays mainly ..	Both cheeks, under chin, extensive	Great improvement, most of it cured	Slight burn, right cheek, with slight teliangiectasis	III.
F. Y.	26	May,'03	June,'04	.. ..	Centre of right cheek	Improvement, ? well; writes sometimes, place hardly noticeable; gets red at times, except at upper part	Nodular L...	III.
A. F.	21	May,'03	Rec'ntly to ankle (ac. carbol.)	Light and X-rays ac. carbol. and X-rays ankle	Extensive on cheeks right wrist, ankle	Face probably well, wrist a little doubtful in one part. Ankle too recent	Nodular, L.	I.
E. B.	21	June,'03	Rec'ntly	Light to Jan., '03, X-rays after, ac. carb. to recurrent nodules	Cheek and nose ..	Excellent, though one or two spots are uncertain	Lupus Hypertrophicus, very bad	III.
M. D.	34	Aug.,'03	Ceased attendance after three weeks			.. ..	.. .. ..	V.
C. F.	31	Aug.,'03	Aug.,'05	X-rays	Thumb	Healed, Nov., 1906	Verrucous	I.
C. H.	23	Oct.,'02	Rec'ntly	Light, X-rays, ac. carb. to promote H.F. internally	Extensive on face, cheeks, lip, nose, eyelids; m.m. nose	Healed mainly; some doubtful points persist in eyelids and on cheek	Was scraped 11 times before light treatment; nodular type	IV.
F. L.	28	Oct.,'02	Mar.,'06	Light only	Centre right cheek, size of half a crown	Well at present..	Nodular type. Recurred Jan.,'06, after apparent relief since May, 1904	I.

M. B.	42	Oct.,'02	Jan.,'06	Light only	Extensive left cheek	Well, except for fresh development in left eyebrow	Nodular; scraped 23 years ago, 3 times	VIII.
H. M.	10	..	..	..	..	..	Lost sight of	IX.
E. G.	27	Dec.,'02	Feb.,'04	Light at first, then X-rays only	Left leg and thigh, foot; could scarcely walk at all	Œdema has improved so much that he can walk freely. A few scattered L. nodules present, for which he has returned for treatment	Œdematous type, very slight appearance of nodules	IV.
C. B.	26	Dec.,'02	Mar.,'05	X-rays mainly ..	Cheeks, nose, chin, neck to clavicles	Great improvement	A very severe nodular case, with a few ulcerations	II.
A. L.	47	Jan.,'03	Nov.,'03	Light only	Right cheek, extensive under chin, right forearm	Practically nil. Improvement at time apparently considerable	Very extensive in various parts of body. On returning home fresh developments in parts previously untouched	VI.
C. T.	67	Mar.,'04	July,'04	X-rays mainly ..	Remains of nasal cartilages and septum, face extensive, cheeks and forehead	Ulcerations healed	Very ulcerated; nose gone	II.
M.A.S.	60	Mar.,'04	Aug.,'05	X-rays	Huge ulcer right cheek, nose ulcerated in three places; right ear, cheek and nose	Ulceration healed, and remaining so	Nov., '06, "no further spread." Ulceration very extensive, ulcers several square inches in extent. Hip disease at 14, lame now. Blind right eye. Erythematous variety	II.

NAME.	AGE	FIRST TREATMENT.	LAST TREATMENT.	NATURE OF TREATMENT.	POSITION.	RESULT.	NOTES.	CLASS.
M. H.	34	Apl.,'04	Oct.,'04	X-rays . ..	Nose, tip ; left foot, dorsum and sole of 3rd toe, and metatarsal and on shin	Nose well, foot recurrent	Verrucose, nodular, ulcerated. 2nd toe removed by Mr. Groves before '04 and scraping ; 3rd toe removed by Mr. Groves before July, '06 ; duration 20 years on face. One spot healed under Dr. Harrison's double lotion treatment. Recurrence in foot	I..IV.
R. J.	57	Apl.,'04	Nov.,'05	.. ..	Very extensive on face	Great improvement, and this still continues (Dr. Harrison)	Nodular type	II.
W. B.	34	June,'04	June 6, 1906	Light and X-rays	Ulceration of septum, nose and alæ, and upper lip ; thickening of upper lip	Well	Nov. 18th, '04, seemed well ; slight indefinite recurrence, April 7th,'06,which yielded readily	I.
C. J.	65	June,'04	Oct.,'05	Light and X-rays	Over whole face ; ulcerated	Ulcerations well, and keeping so ; nodules do not disappear	Nodular type. Has recently returned for treatment. Nodule no longer confluent ; very discrete now.	IV.
J. D.	57	June,'04	Sep.,'06	X-rays only ; coc. and lactic ac. internally	Edges of nostrils ulcerated, m.m. involved	Healed externaly, doubtful internally	Ulcerated type. Lives in country; occasional return	II.

W. C.	21	July,'02	Mar.,'05	Light and X-rays	Face, and below chin on neck	Improvement to skin	Nodular type. Tubercular spinal (cervical) caries	II.
L. G.	1	Jan.,'04	June,'06	Light at first, X-rays later	Shin and elbow ..	Improvement	Nodular	II.
B. H.	74	Apl.,'04	Nov.,'05 or 1, 2, '06	X-rays	Face	Two ulcers healed entirely, at angle of mouth not quite healed	Chronic ulceration for years	II.
F. W.	3	Sep.,'04	July,'05	Light only	Small patch, right cheek	Healed	Nodular type	I.
E. C.	20	Sep.,'04	July,'06	Light, X-rays later	Under ears and chin	Some improvement possibly	Very scaly, nodular and erythematous; very resistant to treatment	VI.
A. S.	25	July,'04	Sep.,'06	Light no good, X-rays	Neck	Improvement with X-rays	L. Nodules round scar on neck. Light useless, owing to soft parts; no pressure possible	IV.
M. M.	60	Nov.,'04	May,'05	X-rays only	Cheeks and nose, extensive	Improvement	Nodular type	III.
W. W.	20	Feb.,'05	Mar.,'06	Light and X-rays	Face, eyelids, cheeks; extensive deficiency in septum	Much improved. Few spots not well	Very scarred; has had X-rays in London with burns, with improvement '01 and '02. Scraped 8 times, 5 years since last scraping. Radium was tried without effect	II.
E. W.	30	Jan.,'05	Aug.,'06	X-rays, ac. carbol.	Face, nose, lip, right temple, under chin, left cheek	Great improvement, one or two spots left only	Increased T.V.F. right apex, no *râles*	IV.

NAME.	AGE	FIRST TREATMENT.	LAST TREATMENT.	NATURE OF TREATMENT.	POSITION.	RESULT.	NOTES.	CLASS.
E. B.	9	Feb.,'05	..	Cautery and ac. carbol. only; no radio-therapy	Chest and neck ..	Chest well, neck no improvement	Nodular patches small	IV.
M. B.	22	Mar.,'05	Present	X-rays only. Ac. carbol. increased reactions	Backs of both hands, and feet, inner side arm, under chin	Very great improvement, but fresh place on arm developed since rest period	Hypertrophic	IV.
P. H.	5	Apl.,'05	June,'06	X-rays, ac. carbol.	Cheek and jaw ..	Healed; hardish still on jaw	Lupoid	I.
H. P.	23	May,'02 Nov.,'06	Sep.,'03	Light, X-rays lately	Margin of nose, m.m., left cheek	Nose healed, cheek not	Ulcerated, nodular; left, but failed to report; has returned with cheek diseased again	V.
M. B.	36	May,'02	Sep.,'04	Light, X-rays and ac. lactic	Tip of nose, m.m. ..	Externally well, m.m. not	Nodular, m.m. scraped lately	I.
J.McC.	18	May,'02	..	..	Ulceration; mouth, eyes	Nearly well	Died of Empyema; very undersized and poor; workhouse child	IX.
J. M.	54	July,'02	May,'05	Light and X-rays	Tip of nose and alæ	Well	Very ill with cholelithiasis, nodular type	I.
S. A.	58	July,'02	Oct.,'03	Light and X-rays	Face and nose ulcerated	Great improvement ..	Dead of renal disease. "No trace of disease on face at death."	IX.
H. P.	..	..	..	..	..	..	Discharged for irregularity of attendance	V.
F. P.	18	July,'02	July,'04	Light, very few X-rays	Face and nostrils ..	Seemed well on face ..	Operated previously; dead of acute nephritis	IX.

F. H.	30	Aug.,'02	Oct.,'02	Light only	Face, entire; lips enormous and ulcerated	Improvement, some ..	Too short a stay for lasting improvement	V.
M. B.	15	Aug.,'02	Dec.,'05	Light and X-rays	Face, buttock, arm ..	Well on face and buttock; one small recent suspicious spot on arm	Hypertrophic; worst case. L. Scleroderma on buttock; dactylitis, both hands	I.
A. L.	60	Aug.,'02	Dec.,'02	Light	Face	No relief possible	Left too soon for any result	V.
B. H.	13	Sep.,'02	Mar.,'05 Recent examination, '06	X-rays, ac. carb. ext. nose	Nose	Ulcerated nose cured, recent lupus on side of nose	..	I.
F.R.	32	Apl.,'05	July,'05 ext.	Light, ac. lactic ..	Lip, m.m., nose ..	Healed externally	M.m. improved	I.
J. H.	29	May,'05	July,'06	X-rays, light later	Neck	Improved and cured ..	..	II.
A, R.	10	May,'05 Jan.,'06	Aug.,'05 Sep.,'06	X-rays	Nose, lip	Great improvement ..	Nodular	VII.
E. W.	59	May,'05	Nov.,'05	X-rays	Face, nose, m.m. ..	Recurrence	Nodular, face, m.m. improved	I.
C. D.	22	Aug.,'05	May,'06	Light and X-rays	Front of right ear and under chin	Apparently well; m.m. doubtful	Phthisis and anæmia; nodular	II.
W. V.	30	Sep.,'05	May,'06	Light only	Left cheek	? well, looks so..	Left too early, and any improvement lost. Vertigo	V.
L. J.	29	Oct.,'05	Apl.,'06	Light mainly, X-rays	Left cheek	No disease visible, Nov., 1906	X-rays. Previously to B.G.H. great irritation; nodular	II.

A CASE OF NARCOLEPSY.[1]

BY

BERTRAM M. H. ROGERS, M.D. Oxon.,

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BY narcolepsy I wish you to understand a condition in which a patient, with almost lightning-like rapidity, falls into a sleep of short duration, the condition not being one of epilepsy.

The patient in whom I observed this condition was a young lady, unmarried, of about 30 years of age. She comes of a highly neurotic stock, chiefly, however, on the mother's side. In the maternal family there are two brothers, one of whom took his own life, while the other is a confirmed dipsomaniac. In a married sister's family there is a daughter in an asylum, a son with disseminated sclerosis, another son who wanders about the world unable to settle to any definite work, but always expecting to make a fortune by some hare-brained scheme, such as a mule service between Suakim and Khartoum; another sister died of Addison's disease, and a son, after an unfortunate circumstance connected with the firing of big guns, became a hopeless nervous wreck and shot himself. In the patient's own family there are no such strong evidences of the neurotic taint, but her sisters are all of a mild neurotic type, requiring rest cures at various times for conditions produced by slight mental stress. The general health of all is good, though not robust, and their mental activity is good, all taking part in social and some in philanthropic work.

The subject of this paper is, perhaps, the most intelligent of the daughters. She has attended various courses of lectures on science or literature, takes in what she hears, and has composed short stories and plays of quite a fair standard of excellence. They are not brilliant literary efforts, but I wish to point out that her intellectual powers are not deficient; on the contrary, she is actively and constantly employed in some mental exercise,

[1] Read at a meeting of the Society, December 12th, 1906.

of a nature rather above the usual standard of young women who have not to earn their own living. Her general health is good, menstrual functions normal, and her visual defects have been corrected with glasses.

The first symptom noticed and complained of was occipital headache. She told me that it seemed as if someone was attempting to lift her up by her back hair. I may mention that she has a great profusion of hair: not only is it long, but extraordinarily thick; in fact, it must seem to some of us who have little of that ornament that the amount of hair many women carry must be of great weight, especially when the arrangement of it is assisted by puffs of various kinds. These headaches as a rule came on in the morning, soon after or at waking, and lasted till midday, when they disappeared. They were very intense while they lasted, necessitating a darkened room and absolute quiet in bed. There never was any vomiting, and the retinæ presented no changes. After the headache, the patient was quite well for the rest of the day; could go out for a walk, or bicycle a short distance, though a greater effort might bring on a return of the head trouble. After a week or two of almost daily headaches sudden short lapses into sleep began. What I observed was that on talking to her she suddenly stopped talking, her eyelids slowly closed after twitching slightly or screwing up of the lids, her hand went to the back of her head, the movement being as if she was in pain, and then with a slight turn of her head to the right she was fast asleep. After a few minutes, or even less at times, she opened her eyes, blinked a little, and went on with the conversation where she left off, seldom if ever losing the thread of her conversation. On waking she was sometimes rather excited in manner, but was evidently quite ignorant of her lapse into sleep. This sudden falling asleep might take place two or three times in the quarter of an hour or more that I saw her, sometimes in the middle of writing or drawing something, or even while eating. This, I was told, would continue all the morning, sometimes with headache, sometimes without, but nearly always she had a heavy sleep for an hour or two in the afternoon. By the evening she had nearly

thrown off the condition, but might occasionally go off suddenly while at dinner. She slept well, almost too heavily, at night. After a few weeks of this condition she began to lose flesh, and her digestion got out of order. Not unnaturally, her parents got rather alarmed, not only about her present state, but for the future, and though I was able to assure them that there was no evidence of serious mischief at the time, I was rather anxious for the future. After a couple of months of varying degrees of somnolence she began to improve, the first symptom that began to give way being the headaches: these got less in intensity and in frequency. Her parents then took her to London to see a distinguished psychologist, but unfortunately she slept and could not be aroused the whole time he was there. A short time before going to London a new symptom began to show itself—pain in the left iliac region, with a sort of spasm when the somnolent state came on. A change of treatment was suggested by the London physician, but did not appear to make much difference, the trouble slowly but surely improving. When her condition allowed her to be about more, she went abroad with a sister and nurse for three months, returning quite well, having lost all pain, all tendency to sleep at wrong times, and having put on flesh to her normal condition.

The patient continued quite well for over two years, went about in society without anyone noticing that anything had been the matter, and resumed her ordinary occupations and studies, in which she showed considerable aptitude, following them with diligence and with considerable intelligence. In fact, apart from the inherent neurotic condition, she was quite well.

The liability to narcolepsy was not, however, entirely eradicated, and, as I shall show, was only dormant, for it was reawakened by a trivial circumstance on one occasion, and by a severe mental stress again some years after.

The first recurrence followed a slight operation which was necessary to relieve an inflamed gland in the neck. She took the anæsthetic well, and recovered from it without any trouble, but on the following day the nurse told me that she had on several occasions lapsed into sleep of short duration, a few minutes or so,

to wake up quite unconscious of having lost herself. This attack was of exactly similar character to the former one, but unaccompanied by headache, and of a decidedly milder type. On more than one occasion she dropped off while the surgeon and I were in the room, waking up suddenly and continuing the conversation where she had ceased before her sleep. This attack lasted only a few days, but naturally caused both the family and myself considerable anxiety as to whether the condition would improve soon, or whether the patient was in for a long period of liability to the attacks as before. Before the wound healed—a week or so—she was quite well, and the symptoms of the condition passed off.

The second relapse followed, as I said, after a severe mental strain. The patient's mother, to whom she was exceedingly attached, died after a few days' illness away from home at a seaside resort. The narcoleptic condition only presented itself once or twice. I only saw her once pass into the semi-conscious state not amounting to actual sleep. She was sitting in a chair, when I observed her close her eyes and appear to lose her balance for a few moments, recovering with the blinking of the eyes that I noticed in the first attack. Had I not known and seen the first attack, I should hardly have recognised what the nature of it was; perhaps I might have thought it a passing fainting attack, but, knowing her previous history, I have no doubt that she had a slight recurrence.

Since this time she has been quite well, and uses her brain considerably for work of all kinds, and as much as she has ever done.

I have no intention of entering any further into a discussion, or giving you an essay on this condition. A very large number of cases have been reported in medical literature differing slightly in details, but in the main the same as the case I have just read. They are interesting cases. The conditions that manifest themselves are so peculiar and strange, and the causation and pathology so obscure, that we cannot hope to be able to explain the phenomena without further observation.

I wish only to point out that the symptoms are not in any way allied to epilepsy, a fact which writers on this condition lay

special emphasis, nor is the relationship to normal sleep quite clear. Raymond, who has written on the subject, in alluding to the pathological varieties of sleep, "mentions a condition which would seem to represent the border-line between normal sleep and the unconsciousness often accompanying recognisable lesions of the cerebral structures," and perhaps this "border-line,"—a word I do not at all like—may be taken to be held by this condition known as narcolepsy. He recognises a mental hebetude and abnormal slumberous conditions associated with di ordered mental activity.

Raymond's account might have been taken from my patient. He describes the condition as one in which the patient outside the usual hours of sleep passes into slumber. The sleep comes on suddenly in the midst of ordinary occupations, even, he says, as in my case, during meals. He states it is noticed in subjects liable to gout, rheumatism, or obesity, or suffering from auto-intoxications. Dr. Blodgett's patient had been subject to the attacks continuously for forty years, and often had several attacks in one day. She fell into a perfectly natural sleep, and could be easily roused by a call or an unusual noise, waking up unaware that she had been asleep, though at times the state was more profound, and she realised that she had passed an appreciable interval in unconsciousness. In spite of these numerous attacks lasting over such a long time, very little mental deterioration was noticed by her friends, and it must be observed that the patient was reaching an age when some failure might not unnaturally follow.

Other writers remark on the association of this condition with a toxic poisoning—toxic poisoning is almost as blessed a word as Mesopotamia—with obesity or diabetes, or deem the association of these diseases as accidental or following the same causative action; but I am inclined to accept Dr. Blodgett's remark, "No definite information upon this causation of symptoms in narcolepsy is yet available." This gentleman, in the account of his case, lays considerable stress on the neurotic history of his patient's family. In this his case agrees with mine, for in both there are the frequent manifestations of some neurosis taking one form or another.

TUMOURS AND TUBERCLE IN MONKEYS.

BY

W. ROGER WILLIAMS, F.R.C.S.

GREAT interest attaches to the maladies of monkeys, because it is among the highest members of this order that we find the nearest approach in organisation to mankind.

Notwithstanding the immense number of these creatures constantly under observation in the zoological collections of Europe, it is a curious fact that only about half a dozen examples of tumours have hitherto been reported; and their comparative immunity from this kind of malady seems to be a reality.

Thus, some time ago Bland-Sutton[1] examined the bodies of 110 of these animals who had died in the London zoo, but not a single example of any tumour did he find. Subsequently, H. J. Campbell[2] made 38 similar *post-mortem* inspections with the like negative result.

Cancer.—Leblanc,[3] however, long ago reported that he had met with instances of malignant tumours in monkeys, and I expect that they do occasionally occur, but I can cite only two modern instances.

The first of these is due to Goodhart,[4] who found "cancer" of the pituitary body in an Anubis baboon from the London zoo, where the animal had long been a familiar denizen. The tumour —a large, ragged-looking object—occupied the pituitary fossa, which it had eroded, and some of the adjacent structures were infiltrated. Histologically, it comprised "large epithelial-like cells arranged in some sort of an alveolar manner." There were no secondary deposits. This tumour, together with the brain and skull, are preserved in the museum of the Royal College of Surgeons.

[1] *Lancet*, 1883, ii. 276. [2] *Guy's Hosp. Rep.*, 1891, xlviii. 19.
[3] *Clin. Vet.*, 1843, Aug., p. 343.
[4] *Tr. Path. Soc. Lond.*, 1883, xxxvi. 36.

The second instance was met with in a bonnet monkey, only eight months old, by Bland-Sutton,[1] the tumour being an intra-ocular glioma, consisting chiefly of small round cells.

In this connection reference may be made to the attempts of Metchnikoff, Shattock and Ballance and others, to transmit human cancer experimentally to monkeys, all of which experiments failed.

Thus monkeys, like human savages, seem to have very little proclivity to cancer.

Here it may be remarked that the alimentary propensities of these animals are predominantly frugivorous; but a good many of them are not averse to animal food when they can get it; some kinds are insectivorous, and others feed upon almost anything they can get. Like mankind, many species have a singular liking for birds and their eggs, as alimentary dainties.

Non-malignant Tumours.—With regard to non-malignant tumours, the available data are exceptionally meagre. Bland-Sutton has met with an instance of leio-myomatous thickening in the uterus of a baboon, which had some resemblance to myoma; and the same observer has also seen a fatty, tumour-like mass in the vicinity of each testis of a monkey, with hermaphroditic malformation.

According to Otto, exostosis is not uncommon at the tip of the tail of long-tailed monkeys; and in the museum of the Royal College of Surgeons of Ireland the hand of a monkey is preserved, showing a spongy exostosis of the first phalanx of the little finger.

Monkeys are also subject to hydatid cysts.

These few examples practically exhaust our present knowledge of non-malignant tumours in monkeys.

Tubercle.—It is an ancient belief, that monkeys kept in captivity are very prone to tubercle, and some years ago a mild sensation was experienced when Bland-Sutton[2] flatly contradicted this cherished conception. In justification of his contention, he appealed to the records of 110 *post-mortem* inspections of monkeys which had died in the London zoo, and comprised only three instances of tubercle.

[1] *J. Anat. & Physiol.*, 1885, xix. 449. [2] *Loc. cit.*

He found, however, that these animals had experienced very heavy mortality from diseases of the lungs, the list comprising 22 examples of bronchitis, 11 of pneumonia, &c.

Some years later, H. J. Campbell[1], as the result of similar work in the same field, arrived at exactly the opposite conclusion, having found that tuberculous disease was very frequent in these monkeys. Thus, no less than 20 of the 38 bodies he examined presented well-marked tuberculous lesions. In addition to these, there were also many cases of broncho-pneumonia.

It is evident that these discrepancies depend largely upon diversity as to the criterion of tubercle. Viewing the matter in this light, we shall probably be right in maintaining the validity of the old belief.

In support of this, reference may be made to the observations of Dr. A. J. Harrison, who has long been connected with the management of the fine collection of animals in the Clifton zoo. He says[2]:—"Monkeys are very liable to chest affections, and there can be no question that we have lost a great many from tuberculous disease of the lungs. They seem very prone to pleurisy, and adhesions are frequently found with and without tuberculous masses in the lungs, but actual cavities do not seem to be frequent. Monkeys seem to be particularly prone to tubercle."

It accords with the foregoing, that Lydia Rabinowitsch[3] has lately found many instances of tubercle among the monkeys that died in the Berlin zoo; and of 36 cases in which these lesions were specially examined *ad hoc*, in nearly three-fourths the type of tubercle was human: examples of bovine, avian and mixed types were only occasionally met with.

It has likewise been proved, that monkeys are very susceptible to the experimental inoculation of both the human and bovine forms of tubercle, as the experiences of Dieulafoy, Krishaber, Dungern and others testify.

Of like import is the common occurrence of specimens of simian tuberculous disease in museums, such as that of the Royal

[1] *Loc. cit.* [2] *Bristol M.-Chir. J.*, 1894, xii. 285.
[3] *Deutsche med. Wchnschr.*, 1906, xxxii. 866.

College of Surgeons of Ireland, which have good collections illustrative of the pathology of these animals.

According to Woods Hutchinson,[1] monkeys in their native forests are but little prone to tubercle; but in captivity it is difficult to procure specimens free from the disease. Thus of 45 monkeys that died in captivity at the London zoo (1898 to 1899) 17 died of tubercle, or 38 per cent. Food habits have much to do with tubercle mortality; for of Hutchinson's animals 35 were vegetarian Catarrhines, and it was among these that all the 17 deaths occurred; whereas, not one of the 10 deaths among the Platyrrhine monkeys, who had taken a fair amount of animal food, was due to tubercle.

Progress of the Medical Sciences.

MEDICINE.

Pleural effusions present so many difficulties in diagnosis, that every additional symptom is welcome which really aids in revealing their presence. In children especially the physical signs are often hopeless, and we may be compelled to make exploratory punctures, which are themselves by no means reliable. Much discussion has taken place over the **paravertebral triangle of dulness on the opposite side** to an effusion which was first described by Grocco in 1902. Thayer and Fabyan[2] found this dulness crossing the median line and extending over to the healthy side in thirty cases out of thirty-two, one of the other cases being an interlobar empyæma, where it could hardly be expected to be present. Over the vertebræ themselves the dulness is marked to about the level of the flatness caused by the effusion on the affected side. The base of the triangle extends beyond them for two to seven centimetres, and a line joining the end of the base to the highest dull vertebral hypophysis forms the third side. In this area the respiratory sounds may be suppressed, and those sounds which are heard are tubular or nasal in character. It is usually larger in right-sided effusions, and is particularly valuable in encapsulated ones where the diagnosis is difficult. In pneumonia a similar well-marked area of dulness rarely occurs, and if present it does not alter or vanish when the patient lies on

[1] *Human and Comparative Pathology*, 1901.
[2] *Am. J. M. Sc.*, 1907, cxxxiii. 14.

the affected side. In effusion, on the contrary, this dulness at once changes with the posture. The writers think that the fluid lies against and in front of the vertebræ and dulls the vibrations which would be conveyed through them. Pieraccini noted a similar but hyper-resonant area on the healthy side in a case of pneumo-thorax. I have endeavoured to subject this last observation to a test, but though the resonance over the vertebræ was marked, it was difficult to satisfy oneself that there was real hyper-resonance there, or over the healthy side in the area under discussion.

Hypertension.—Some time ago reference was made in these columns to the terrible mortality due to the common forms of apoplexy, that is chiefly to cerebral hemorrhage and thrombosis. Since that time considerable progress has been made both in the way of prevention and treatment. The estimation of blood pressure by exact instruments has become more common, and much research has been devoted to the means of preventing or reducing excessive tension. Since many cases of this over-tension have been found unconnected with nephritis or any known disease, efforts have been made to map out the course and tendencies of this "idiopathic" form, with the result that a fairly well-marked group of symptoms has been recognised, though the underlying cause is still uncertain. A theory has been put forward by Loeb[1] that hypertension is an effort towards self-preservation, though at a serious cost. The blood supply of certain parts of the organism is an absolute necessity, and to maintain this the pressure is automatically raised, even though other structures are imperilled. Cushing, indeed, propounded this explanation of the extraordinary blood tension found in compression of the brain, viewing it as an effort to maintain the blood supply of the medulla. In kidney disease and other instances the rise of pressure has been usually regarded as the result of the irritation of various toxins on vaso-motor nerves, or on the muscular wall of the arterioles. Increased suprarenal secretion, lessened thyroid activity, or excessive viscosity of the blood, have also been invoked as causes. Now Loeb finds that in kidney disease hypertension appears chiefly in those forms where the glomeruli are most affected, and he regards it as a means of maintaining their blood supply, and hence the functional activity of the kidneys, by a reflex which raises the general blood supply through the cerebro-spinal centres. Similar reflexes are invoked in other cases of hypertension. Certainly the supply of blood to each vital organ is all essential. In orthopnœa, as Leonard Williams says, the patient sits up to facilitate the efflux of venous blood from the medulla. Still, there seems little direct proof of these reflexes, and there is much to be said on the other side from the fact that certain substances in the blood stream can without

[1] *Deutsches Arch. f. klin. Med.*, 1905, lxxxv. 348.

doubt act directly on the muscular coat. Arterio-sclerosis is more often a result than a cause of high tension, as most observers now agree, and sometimes neither this nor any other condition can be detected as a cause. Though the patient be abstemious and placid, with healthy kidneys and vessels, the blood pressure may reach 200 mm. He may suffer from dyspnœa on slight efforts, attacks of vertigo, somnolence and palpitation.[1] The pulse rate shows no difference when he is standing and lying down, the aortic second sound is accentuated and the apex displaced outwards. Sooner or later the heart, labouring under its load, breaks down with a leaking valve, perhaps the aorta dilates, or a cerebral hemorrhage takes place, and the patient is killed or crippled for life. Clearly it is important to prevent this conclusion, either by discovering the cause of the evil, or, if this is impossible, by warding off the secondary results. Benefit is often obtained by reducing the quantity of the food, and especially the nitrogenous elements of it, and by prohibiting tea, coffee and tobacco. Oliver, at the meeting of the Therapeutical Society, advocated in some cases a lacto-vegetarian diet with the exclusion of salt. The drinking water should contain a minimum of calcium salts. Among other vaso-depressants certain benzene derivatives appeared to be useful. Senator[2] appears to rely upon similar dietetic treatment, and thinks that iodine preparations are chiefly valuable from their lessening the viscosity of the blood. He prefers to give them in combination with nitrites. Thus he administers potassium iodide with sodium nitrite for considerable periods. Others employ nitrites only on special emergencies, and trust chiefly to careful diet with the frequent administration of salines and blue pill.

Huchard[3] claims that aneurysms are best treated by thus lowering the blood pressure, and reports some instances of success. He employs a strict diet with a minimum of meat and extractives, tea, coffee, stimulants, and tobacco, and enforces rest. Too much value has, he thinks, been given to the iodides, and he would rely more upon the use of nitrites. From time to time he gives a course of milk diet with theobromine to eliminate vaso-constrictor toxins.

One of the most important points in connection with hypertension is the treatment which should be adopted when the heart gives way under the strain of high blood pressure. Leonard Williams, for instance,[4] insists that to give heart tonics in mitral regurgitation due to obstruction in the peripheral vessels is merely to whip a tired horse, but that if we lower the tension the heart will recover its tone. Evacuants, theobromine and rest in bed, and vaso-dilators would then be our chief remedies. On the other hand, some writers, such as T. C. Janeway,[5] do not hesitate to

[1] Leonard Williams, *Clin. J.*, 1907, xxx. 29. [2] *Folia Therap.*, 1907, i. 40.
[3] *J. d. Praticiens*, 1906, xx. 307. [4] *Loc. cit.*, p. 39.
[5] *Am. J. M. Sc.*, 1907, cxxxiii. 54.

employ digitalis in the failing heart due to hypertension, though in a sudden failure of the left ventricle Janeway advises the simultaneous use of vaso-dilators and cardiac stimulants.

The diagnosis of typhoid.—Among other aids to diagnosis the following have been recently under discussion. The continuous loss of the abdominal reflex in the infra-umbilical region has been shown by J. D. Rolleston[1] to have considerable value if daily examination is made for it. Out of forty-five cases which he tested, he found it absent or diminished in forty-two, the three others not being examined till late in the disease. The reflex is practically always present in young people both in health and during all other diseases, except in certain affections of the nervous system and abdominal states, such as appendicitis and peritonitis. Thus Müller and Seidelmann found it in 2,999 persons out of 3,000 who were not suffering from those two groups of diseases. After the age of 50 it tends to disappear even in perfect health, and therefore it is of no use as a test for typhoid after that age. In young people, however, the reaction obtained by stroking the abdomen by a pencil disappears, or is much diminished during typhoid for a variable period averaging a week. It is not clear how early it is lost. At a very early stage it may be quite brisk, and then fades away, to reappear towards the stage of lysis. If it fails to return when the temperature is falling, a relapse may be expected, and it is therefore of some prognostic value. A persistently high temperature after the return of the reaction is due to some other cause than the typhoid itself.

A yellow pigmentation of the palms of the hands and the soles of the feet is in my own experience very frequent in typhoid, and of some diagnostic value. Though it may depend to some extent on the occupation and personal habits of the patient, we rarely see in other diseases the vivid colouring which is present in typhoid. Regis[2] attributes its recognition to Philipowicz, who found that it was peculiar to typhoid, and ascribed it to an atrophic condition of the skin due to the failure of the capillary circulation. The cause is however uncertain, but Grocco thinks it is almost always present in typhoid, especially in children and women, though less certain in men. It usually appears in the first week, disappears with convalescence, but returns during a relapse, and seems to bear no relation to the severity of the case. Bernard describes another symptom to which he attaches some value in childhood. If we palpate the ileo-cocal region with care, two or three swellings will be felt varying in size from a filbert to an almond. They are parallel to the long axis of the colon, and are perceptible about the end of the first week. It has been said that these swellings are hypertrophied Peyer's patches, and they certainly seem to correspond to the situation in which the patches are found.

[1] *Brain*, 1906, xxix. 99. [2] *M. Press and Circ.*, 1906, cxxxiii. 6.

The presence of typhoid bacilli seems almost universal in the secretions and fluids of the body. Thus they are found not only in the stools, the urine and the roseolous spots, but also in the blood, the sputa, and sometimes in the bile. Von Jaksch found them in over 94 per cent. of the splenic punctures he made, and claims that this method is free from danger and is the best means of an early diagnosis. Preble[1] notices that more reliable results are now given by blood cultures, as the technique is improved. He quotes Duffy as getting positive results in all his cases where the temperature was over 102°, but less frequently when it was lower. The difference was apparently due to the stage in the disease, and the suggestion is made that the bacilli are always present in the second and third week. Coleman and Buxton find that in 604 reported cases bacilli were met with in 453, or 75 per cent. Hirsh too concludes that bacilli are always to be found at some stage, but that they disappear about the end of third week; while Pöppelmann claims to have obtained excellent results by simply making blood smears in the ordinary manner, and staining them by the May-Grünewald method. If this is confirmed in practice, a most valuable aid to diagnosis will be gained.

GEORGE PARKER.

SURGERY.

Several papers have been published during the last few years[2] on **delayed anæsthetic poisoning,** and such a condition is now well recognised, and comes, of course, under the observation of the surgeon in charge of the case, and not the anæsthetist. As the symptoms are not pathognomonic, it may be extremely difficult to say in some cases whether they have been caused by the anæsthetic or not, and it is highly probable that in several cases in which they have been attributed to it they have been due to other causes. In many of the cases of late anæsthetic poisoning, acetone or diacetic acid, or both, have been found in the urine, and there is often a smell of acetone in the breath; but acetone has been frequently found in the urine after the administration of an anæsthetic without symptoms,[3] and it is stated by Guthrie to be present in "starvation, malignant cachexia, peritonitis, gastric ulcer and other abdominal disorders, sepsis, pneumonia, after poisoning by phloridzin and morphine," as well as in diabetes, and he says "it may be artificially induced by the injection of fat." Indeed, it seems to me probable that if carefully looked for it would be found in the urine of healthy persons fairly often.

[1] *Prog. Med.*, 1907, i. 175.

[2] Guthrie, *Lancet*, 1894, i. 193; 1903, ii. 10; 1905, ii. 583.

[3] Hubbard, *Boston M. and S. J.*, 1905, cliii. 744; abstract in *Lancet*, 1905, ii. 234.

Kelly[1] found acetone and diacetic acid in the urine of patients on admission to hospital suffering from various diseases who had not had an anæsthetic, and without any symptoms like those of late chloroform poisoning. Moreover, symptoms such as occur in these cases of late chloroform poisoning may occur without any anæsthetic or operation, and may be fatal,[2] and the condition present in paroxysmal vomiting of children is a closely allied one. Again, sepsis may cause similar symptoms, and it would be almost impossible to say in a septic case that they were due to delayed anæsthetic poisoning rather than to the absorption of a septic toxine, though not necessarily one producing pyrexia. It is only in cases in which the patient is in good general health at the time of the operation, and this an aseptic one and unattended by shock or absorption of carbolic acid from the skin, that we can regard the anæsthetic as the cause of the symptoms. Chloroform has been mainly responsible for such symptoms, but there are a few cases in which they have followed the administration of ether.[3] In carboluria the peculiar conditions of the urine would, of course, indicate the nature of the case, but the symptoms closely resemble those of late anæsthetic poisoning. Some seem to think those of fat embolism do also, but they certainly do not in a typical case of fat embolism.

The symptoms of late anæsthetic poisoning are described by Guthrie[4] as profuse and repeated vomiting, the vomit eventually resembling the dregs of beef-tea, restlessness, excitement, delirium, alternating into periods of apathy, occasionally jaundice, and unconsciousness deepening into coma. The symptoms come on about twelve hours after the anæsthesia, and in the interval the patient may seem to be progressing favourably. Death may occur in twelve hours, but not usually until the fifth day. There is not usually any rise of temperature, but it may be very high. Albumin may be present, and casts may be found in the urine also. I have already referred to the smell of acetone in the breath.

In many of the fatal cases extreme fatty change has been found in the liver, and also a similar change in the heart, in the muscles, and in the kidneys, and no other condition has been discovered associated with this.

It is thought by most of those who have studied this subject that the fatty change is produced by the chloroform, and in some way, and at any rate to some extent, is the cause of death; but Guthrie holds that it precedes the anæsthesia, and is only augmented by it, but that this augmentation is in some way the cause of the symptoms. If such fatty change, found after the administration of chloroform, were caused by it alone, both the fatty

[1] Kelly, *Ann. Surg.*, 1905, xli. 161.

[2] Brackett, Stone and Low, *Boston M. and S. J.*, 1904, cli.; abstract in *Lancet*, 1904, ii. 846.

[3] Favill, *J. Am. M. Ass.*, 1905, xlv. 691. [4] Guthrie, *Lancet*, 1905, ii. 583.

change and the resulting symptoms ought to occur in proportion to the duration of the administration; but they do not. Indeed, if such fatty change were the sole cause and were due to the anæsthetic, cases of late anæsthetic poisoning should only occur after very prolonged anæsthesia (cases, in fact, in which an excessive dose has been given), as it is such a very rare condition. If, therefore, the fatty change is due to the chloroform, and in any degree causes the symptoms, there must be also some other factor at work, and we are quite ignorant as to what this is, for there seems to be no evidence to support Guthrie's view that fatty degeneration of the liver precedes the administration of the chloroform, though if it did the effect of the chloroform would be readily explained, for it would act "as the last straw," as it has been expressed. There is no doubt an extremely fatty liver may be present in children who have had no anæsthetic. Dr. John Thomson, of Edinburgh, has seen very extreme examples in children dying of broncho-pneumonia.[1]

We know from experiments on animals[2] that subcutaneous injection and inhalation of chloroform will produce fatty degeneration of the liver and other organs. In some of the experiments a control examination of the liver was made under ether at an earlier period. Ether injected subcutaneously did not produce this fatty change in the liver, yet some of the fatal late anæsthetic poisoning cases have been after ether, and fatty changes were found in the liver, kidneys and muscles.[3] Guthrie regards such cases as proof of pre-existing fatty change in the liver[4]. But then, if ether does not markedly increase this, how could such fatty change, accelerated by the ether, have been the cause of death? It must need a very light straw indeed, as the last one, if the ether is to be blamed at all.

In chronic tuberculosis fatty changes in the liver are quite common, yet late anæsthetic poisoning is not specially common in such cases.

It cannot then be regarded as proved that the fatty change found in the liver, heart and kidneys is by itself really the cause of death in these cases. Even granting that it is in some way connected with the death, in what way it is so is still quite uncertain. Neither is the relation of the symptoms to the presence of acetone and diacetic acid clear. In fact, at the present time the whole subject is very obscure.

The treatment adopted by some in diabetic coma has been recommended for this condition—saline transfusion, and the administration of bicarbonate of soda. It would seem that if it

[1] Stiles and McDonald, *Scottish M. and S. J.*, 1904, xv. 97.

[2] Stiles and McDonald, *loc. cit.*; Ungar and Junkers, *Über fettige Entartung in Folge von Chloroform-inhalationen*, Bonn, 1883; Ostertag, *Arch. f. path. Anat.*, 1889, cxviii. 250; Schenk, *Ztschr. f. Heilk.*, 1898, xix. 393.

[3] Carmichael and Beattie, *Lancet*, 1905, ii. 437. [4] *Lancet*, 1905, ii. 583.

is an acid poisoning it is neither acetone nor diacetic acid, but a precursor of these—β oxybutyric acid, which is the poisonous agent.

* * * *

The publication by Mr. Barker of a paper on "**Spinal Anæsthesia**"[1] has brought the subject prominently before the minds of surgeons in this country, and it may be well to consider the value of this method of producing anæsthesia, as contrasted with the ordinary one. Mr. Barker does not suggest its general adoption in place of the usual method. He has tried it in 128 cases with a view to determine its value, and seems well pleased with it. It has been used in several thousand cases on the Continent by various surgeons.

There are three questions to be answered before we can form an opinion as to its value :—

1. Has it advantages over general anæsthesia as at present employed ? In answering this we must consider its relative risk to life, and the probability of unpleasant sequelæ.
2. What are the limitations as to its use ?
3. Is it certain in its action ?

There is now nothing unpleasant to the patient in general anæsthesia. When ether was given alone there undoubtedly was ; but ether preceded by nitrous oxide or ethyl chloride is not unpleasant to take, nor is chloroform. The after taste of ether is, however, often much complained of by patients. But, as Mr. Barker says, some patients have a great dread of a general anæsthetic. In what does this dread really consist ? If it is fear of death from the anæsthetic, then we can hardly represent to them that spinal anæsthesia is safer on the evidence at present before us. We should rather point out to them how seldom anyone dies from a general anæsthetic. If it is some unreasonable fear of losing consciousness, or dread of suffocation, then spinal anæsthesia seems most suitable in such cases. But many patients would, I think, prefer to lose consciousness, and to know nothing of what was going on. Mr. Barker tells us that those patients of his who had had both chloroform, and spinal anæsthesia, preferred the latter.

After a general anæsthetic vomiting is, of course, sometimes trying, though often absent, and headache may occur as well. With stovaine both headache and vomiting may occur, and the vomiting even occur during the operation (though this is very rare). In Mr. Barker's second series of fifty cases, some nausea or vomiting and headache were present in twenty, but only quite exceptionally was vomiting marked. These symptoms were usually removed by phenacetin and caffein, or a purgative. The after effects of stovaine in one hundred of Chaput's cases[2] were vomiting in ten

[1] *Brit. M. J.*, 1907, i. 665.

[2] "L'Anesthésie rachidienne à la Stovaine," *Arch. de Thérap.*, Nov. 15th, 1904 ; Chiene, *Scottish M. and S. J.*, 1906, xviii. 220.

(not always on the first day), nausea in thirteen, headache forty times (not always on day of operation), always relieved by application of ice. Neuralgia is said to have occurred in more than eighty cases, but it is not stated where. This also in thirty-five cases was later in its onset than the day of operation. When cocaine was used, these symptoms and pain in the back were often severe, and the after effects seemed worse than with general anæsthesia. With stovaine it is difficult to decide. They do not, at any rate, seem worse than the after effects of general anæsthesia.

The risk to life of spinal anæsthesia does not seem great, but there have been serious symptoms from its use, and I do not know that we are yet in a position to compare its risks with general anæsthesia. Tuffier up to 1904[1] had no bad results in 2,000 cases. At the German Surgical Congress, 1905,[2] Hermes, of Berlin, in reporting ninety cases of Sonnenberg's, said that a cold sweat with pallor and small pulse occurred in several abdominal operations under stovaine, and Preindlsberger, of Sarajewo, in 305 cases had six similar ones. Chaput[3] describes a case in which, after injection of stovaine from a "defective old stock," the pulse stopped, but returned with the administration of stimulants, and the use of artificial respiration. The case is quoted by Chiene[4]. Silbermark had used stovaine in 300 cases, and thought that with this drug, eucaine and tropacocaine there was no danger; nor had Neugebauer observed any alarming symptoms in 480 cases. Bier stated that the use of an adrenal preparation with the stovaine limited its dangers considerably, and should always be used. Septic infection of the spinal canal seems never to have occurred in the experiences of these surgeons, and should not, of course, occur, but might if the method were employed by those unaccustomed to thorough methods of sterilisation. There is, at any rate, one case on record of persistent paraplegia following spinal cocainisation. At the Surgical Society of Paris a patient was shown who three days after the operation began to develop spinal symptoms, and they continued eight months later, when the case was reported.[5]

Almost all surgeons who have endeavoured to produce spinal anæsthesia have had failures, and some many failures, but it seems generally considered that this is due to faulty technique.

Mr. Barker says it may be better not to use this method for the very old, at all events for the present. But it is difficult to know at what age persons are to be regarded as very old. Bier[6] recommends it for the weak and aged; Hermes[7] for patients over 75.

Spinal anæsthesia has one distinct advantage, and that is that

[1] "Anesthésie rachidienne à la Stovaine," *Wien. klin. therap. Wchnschr.*, 1905, No. 15.
[2] *Ann. Surg.*, 1905, xlii. 942. [3] *Société de Biologie*, May, 1904.
[4] *Scottish M. and S. J.*, 1906, xviii. 220.
[5] *Lancet*, 1905, i. 677. [6] *Loc. cit.* [7] *Loc. cit.*

in an operation on the lower limb, such as a hip joint amputation, likely to be attended by shock, it tends to prevent it, just as Crile showed that the injection of cocaine into the large nerve trunks of the limbs would. In a patient much exhausted by hectic fever, I amputated just below the trochanters under stovaine spinal analgesia, and there was no shock at all; indeed, an hour after the operation his pulse was only 100°, whereas in the ward before he went up to theatre it had been 120° for more than twenty-four hours. The anæsthesia was perfect, and there was not the slightest nausea or headache after it. In cases in which the lungs or kidneys are not in a fit condition for general anæsthesia, spinal anæsthesia has also a distinct advantage.

Spinal anæsthesia above the umbilicus seems uncertain, but some surgeons have done operations on the upper abdomen with it, though others regard the anæsthetisation of this area as too uncertain. This is certainly a considerable disadvantage in abdominal surgery, for owing to uncertainty in diagnosis we may find we have to extend an incision begun for disease supposed to be in the lower abdomen into the upper, or the disease, though largely in the lower abdomen, may extend into the upper. For instance, what is diagnosed as acute appendicitis may turn out to be a perforating duodenal ulcer. Another disadvantage of spinal anæsthesia for some abdominal operations would be the inability to employ the Trendelenburg position, at any rate early in the operation. Speaking of their experience of spinal anæsthesia at the German Surgical Congress in 1905, both Bier and Silbermark did not recommend it at all for abdominal operations; but other surgeons have had a satisfactory experience of it in the lower abdomen.

There does not seem, then, any reason why spinal anæsthesia should replace general anæsthesia, except in cases in which the patient would prefer it, or in which there is so much collapse that we dread to give a general anæsthesia, and local anæsthesia would not be satisfactory, and in cases in which we specially fear severe shock, even though the patient is not collapsed; also when the heart, lungs, or kidneys are not in a condition for general anæsthesia. We must remember that if there is great abdominal distension it would not be easy to get the spine well curved forwards to make the lumbar puncture, and we must also realise fully that our time for performing the operation under spinal anæsthesia averages about an hour, though it may be increased by the addition of adrenalin to the fluid injected.

The technique of this method is fully described in Mr. Barker's paper.

C. A. MORTON.

OBSTETRICS.

The prevention and treatment of **post-partum hemorrhage** is a subject of never-failing interest to the practitioner, and in view of the sudden and frequently fatal catastrophe which may ensue as the result of its occurrence, every attempt to suggest new or improved methods for either its prevention or cure demands careful examination.

Stanmore Bishop,[1] as the result of an article on this subject, has been the cause of a considerable correspondence. In his original article he produces many arguments for the employment of a method certainly not new, and sufficiently well known, although not widely taught or practised as a primary method of dealing with this complication, namely compression of the abdominal aorta.

He gives a résumé of the different causes of post-partum hemorrhage as generally taught, under the following headings, namely primary external atonic, primary concealed atonic, secondary external traumatic and secondary concealed traumatic, and states that while the attendant is endeavouring to satisfy himself under which of these heads the particular case falls, the patient is being rapidly exhausted by bleeding.

He also states that in addition to the delay while the exact cause is being mentally decided on, a prolonged search for tears of the viscera, uterus or vagina is necessary, which has to be carried out in the midst of a torrent of blood, the clots from which obscure everything, and only after this exploration can anyone feel certain that the cause is not traumatic; and all through this tedious and difficult exploration the patient's vitality is rapidly becoming less.

Next, he states the student is taught that there are fourteen distinct causes of atonic post-partum hemorrhage, the first of these being improper management of the third stage, and describes the student as often exciting irregular and ineffectual uterus contractions by squeezing the uterus during its intervals of partial relaxation, and then removing the placenta by the hand introduced into the vagina or uterus.

After giving a list of the fourteen causes of atonic post-partum hemorrhage, he proceeds to eliminate a large number, such as hæmophilia, which is, as he states, rare, inversion of the uterus, which does not occur if the third stage is properly managed, and adherent or retained placenta, as regards which he considers that any attempt at removal whilst bleeding is going on is to court disaster, since it is certain to be attempted with unsterilised hands, while the presence of the placenta in the uterus makes no difference to the really effective measures which will arrest the bleeding.

[1] *Practitioner*, 1906, lxxvii. 145.

He groups all the remaining causes under the heading of "tired uterus," and points out that it is useless to attempt to stimulate contraction in a uterus that is relaxed, because it is "tired," and so has lost temporarily the power of contraction.

He makes much of the difficulty of explaining what is meant by uterine "retraction." The difficulties of explanation are not great, and, after all, quibbling over the precise explanation of a term is not of any great assistance to the seeker after truth.

He denies unhesitatingly that uterine contraction—to the securing which all the energies of the attendant should be directed—is the thing which should be aimed at, and states that the truth is exactly the opposite. "We must not look to uterine contraction to stop the hemorrhage, but to cessation of the hemorrhage in order to permit once more of contraction of the uterus."

He then states that there are six various measures given by writers on midwifery by means of which uterine contraction may be brought about, and asks, "Do the advisers of these various measures believe in any one of them? No. We are to 'try' them all, one after the other, and no one for any length of time." They are expected to fail, as to each one is appended the phrase, "If this fail." All having been tried, thrombosis, produced by the action of perchloride of iron or other styptic, is the last resource. Finally, having proved the uselessness of all the measures advised, he draws the attention of readers to the fact that hemorrhage from veins can be stopped by elevating the bleeding part, and from arteries by compressing their parent trunks, and that consequently elevation of the pelvis will stop such uterine hemorrhage as comes from uterine veins, and pressure on the aorta such as comes from uterine arteries.

He, in consequence, advocates the raising of the foot of the bed by pushing a table beneath it, or placing the feet of the bed on two chairs, in order to cope with the venous, and compressing the aorta in order to stop the arterial hemorrhage.

Having in this way checked the immediate outflow of blood, the uterus, directly it shows signs of returning vitality, is assisted to expel contained clots, and the compression of the aorta handed over to the nurse, while the surgeon proceeds to sterilise his hands for the purpose of removing adherent placenta, or searching for lacerations.

He argues that the circulation through the ovarian arteries not being cut off is sufficient to preserve the contractility of the uterus, and keep it sufficiently supplied with blood to ensure its muscular fibre retaining its vitality. He gives, in support of his contention, the instance of a thigh cut off by a circular saw, and asks, "Would the surgeon in such a case, supposing his usual appliances absent, squirt hot water at the stump or apply perchloride of iron"?

He insists that a combination of the two methods he suggests, namely elevation of the pelvis and compression of the aorta, are the only true ways of combating post-partum hemorrhage, and that these two methods in combination must be persisted in, the latter for three hours if necessary, and the former for twelve.

Gordon Fitzgerald[1] protests against the condemnation of well-tried methods on the experience of one man, and against that of many others who have proved the efficiency of the methods they advocate *when properly applied*. He dissents from Mr. Stanmore Bishop's description of a typical case of such hemorrhage as occurring in a healthy young primipara, who has had satisfactory first and second stages of her labour, and dies of *acute primary atonic post-partum hemorrhage, primary inertia*.

He states that the forces which naturally control post-partum hemorrhage are contraction, retraction, and clotting.

He points out that neither active contraction nor clotting will permanently check post-partum hemorrhage in the absence of retraction, which he describes as that plastic force which moulds the uterus to its contents. He admits that retraction is aided by contraction, but he has as yet seen no convincing proof that it is dependent on contraction, and cannot come into action in its absence.

He allows that compression of the aorta will cause the cessation of post-partum hemorrhage, but considers that it is difficult to carry out effectively, except in hospital practice, where there are numerous assistants. He doubts the influence of elevation of the pelvis on hemorrhage coming from the veins, especially if the aorta is compressed. He relies mainly on prophylaxis, advising that hæmophilia, if it be present—and it is well known that it is a very rare condition in the female—be combated in advance by the administration of arsenic, strychnine and chloride of calcium.

Protraction of the first and second stages is to be avoided, and the third stage as prolonged as is consistent with the safety of the patient. All preparations for the treatment of post-partum hemorrhage should be made in advance.

Prolongation of the second stage should be avoided by the early use of forceps, but prolongation of the first stage is comparatively unimportant.

The indications for termination of the second stage will be found in the conditions of the patient's pulse and temperature In cases of hydramnios and over-distension from twins, especially in multiparæ, the emptying of the uterus should be gradual, and plenty of time allowed in the second stage; by early puncture of the membranes high up in the first condition, and allowing of considerable delay between the birth of the two children in the second, so that the over-distended uterus, whose contractions are

[1] *Practitioner*, 1906, lxxvii, 652.

sure to be weak at first, may gather strength for its final efforts. In the case of multiparæ, a previous history of adherent placenta will prepare us for dealing with that condition.

He advises after thirty minutes waiting, if the slight hemorrhage which occurs with each contraction due to the expulsion of already effused blood does not diminish, the extraction of the placenta with the gloved hand.

The improper management of the third stage is the great predisposing cause.

The immediate grasping of the uterus and expulsion of the placenta directly after the birth of the child is one of the most fertile causes. Unless there is undue hemorrhage, no efforts at expulsion should be practised unless the placenta is found to be in the vagina. That it is in the vagina can be recognised by drawing out all the loops of cord in the vagina, and then grasping the uterus and lifting it towards the ensiform cartilage, when, if the placenta is still in the uterus, the cord will be drawn back into the vagina.

Forcible and rapid attempts at expulsion result in irregular contractions, possibly imprisonment of the placenta in the uterus by hour-glass contraction, or detachment of portions of its maternal surface.

E. Hastings Tweedy[1] considers that Stanmore Bishop's statement that "post-partum hemorrhage is essentially a general practitioner's tragedy, and that from his own experience and that of others, cases do not occur in hospital," is unwarranted. He finds that the statistics of the Rotunda show that in 5,695 women there occurred fifty-six cases of post-partum hemorrhage, of which thirty-one were due to retained placenta, membranes, or clots mechanically preventing the closing down of the uterus, three were traumatic, and four of the secondary variety. Of the fifty-six cases, three died from supervening shock.

Compression of the abdominal aorta as a means of controlling hemorrhage has been taught and practised at the Rotunda for years, and is looked upon as a valuable temporary expedient.[2]

That retraction is independent of contraction is shown by the following arguments. The uterus does not commonly contract for about seven minutes after the birth of the child. If the prevention of hemorrhage depended on contraction alone, free flooding should occur in all cases, and recur after contraction has passed off.

In the case of a woman delivered with forceps, in the absence of contraction she must inevitably bleed to death. This we know does not happen.

During Cæsarian section the gradual thickening of the uterine wall can be *seen* to be taking place, and that in the absence of contraction.

[1] *Practitioner*, 1907, lxxviii. 361. [2] *Vide* p. 121.

Slight mechanical causes, such as a piece of retained placenta or a full bladder, appear to be able to prevent retraction, and so promote the occurrence of hemorrhage.

G. E. Herman,[1] in continuing previous articles on this subject, points out that Stanmore Bishop, in his arguments against the use of perchloride of iron or other astringents in the treatment of post-partum hemorrhage, is attempting to controvert a proposition put forward by no modern teacher, and states that this method is now extinct. It is a bad method because (1) it is unreliable, and (2) leaves the uterus full of clot, and thus predisposes to sapræmia. He says that no student is taught to ascertain under which of four heads the cause of the hemorrhage falls, and that any student under examination stating that he would search for lacerations with, presumably, speculum, light, and swabs, as his first treatment of post-partum hemorrhage, would be looked upon as a danger to the public, and referred.

Herman refers[2] to the danger of undue haste in securing the termination of the third stage, and says that this arises not from producing "spasmodic and inefficient contraction," as claimed by Bishop, but from the possibility of the membranes not being detached naturally when the expulsion of the placenta takes place, and consequently a piece of chorion being left behind.

Herman does not believe in the numerous causes of post-partum hemorrhage described by Bishop, and states that many of them may be neglected as not being in any way concerned, and knows of no evidence that either drugs or diet during pregnancy have any effect on the amount of bleeding during the third stage of labour.

Herman differs absolutely from Bishop in holding that the current teaching that it is uterine contraction which stops post-partum hemorrhage is correct.

Pressure is only a temporary means of suspending bleeding until the uterus has regained its contractile power.

As regards retraction, Herman reaffirms the definitions of *retraction* and *contraction* practically in the terms generally familiar and almost identical with those used by Fitzgerald, and he states that one great cause of post-partum hemorrhage is the emptying of the uterus in the absence of a pain.

He defines a "tired" uterus as one that is not contracting vigorously, and consequently not doing any harm either to the maternal or fœtal soft parts, and considers that the remedy for this is rest secured by a dose of opium. If, as in the practice of the most experienced accoucheurs, post-partum hemorrhage is caused by the retention of a succenturiate placenta, or piece of membrane in the uterus, the best treatment is to remove it.

He doubts the statement that serious post-postum hemorrhage is caused by cervical lacerations.

[1] *Practitioner*, 1907, lxxviii. 445. [2] *Loc. cit.*

He agrees with Bishop that when with post-partum hemorrhage contraction is absent, pressure is the best thing in the shape of bimanual compression applied to the body of the uterus.

He points out that compression of the aorta in post-partum hemorrhage was advocated by Baudelocque in 1835, and previously by Ramsbotham. Robert Barnes and many other English authors have also recommended it.

In referring to Bishop's suggestion as to the mental state of a surgeon who would squirt hot water at a divided limb to check bleeding, he points out that hot water has a specific contractile effect on the uterus, so that the cases are in no sense parallel.

The objection to an immediate attempt to replace an inverted uterus or remove a piece of placenta, that it is likely to be done with unsterilised hands, is answered by pointing out that if the attendant has done his duty during the second stage, his hands should be sterile, and ready during the third stage for any such emergency.

He objects to the statement that a number of " experiments are to be made " ; the measures described are not experiments, but manipulations, each with a definite and necessary object, the final aim being to secure an empty, clean and contracting uterus, with retraction in the intervals between contractions. If contraction cannot be got, pressure must be resorted to. This is best applied to the uterus, but there is no reason why the doctor should not compress the uterus and the nurse the aorta. Lastly, the great prophylactic is, " Do not deliver when the uterus is tired."

This series of articles, in the writer's opinion, confuses the issues. The writers all seem to have some different condition in mind.

Stanmore Bishop, in his advocacy of what is undoubtedly a useful method as an adjunct in severe cases, spoils his case by unnecessary declamation and abuse of an opposition which does not exist.

To suppose that it is necessary to make a prolonged search for lacerations in a case of post-partum hemorrhage is ridiculous. In the first place, as Herman states, hemorrhage from a lacerated cervix is only quite exceptionally severe, and occurs with a hard, contracted uterus, which must be obvious to anyone attending a confinement who observes the condition of the uterus by keeping his hand on it for a reasonable time, not less than half an hour, after the completion of the third stage.

In the second place, if the uterus is watched by the hand on it after the third stage is completed for this period, how often does severe post-partum hemorrhage occur ? In the writer's experience, out of close on 8,000 cases, he has met with himself, or been summoned to, only twelve cases, in all of which but two the hemorrhage was stopped by grasping the fundus through the abdominal wall ; in these two sudden severe hemorrhage occurred

which was stopped by introducing the hand into the uterus and compressing the placental site against the closed fist.

Hemorrhage does not occur even in an inactive uterus so long as the placenta is not detached, and anyone who has done a Cæsarian section knows how firm this attachment is.

Again, in a Cæsarian section, when delivery has been effected in the absence of labour pains, the uterus retracts almost at once after the delivery of the child, and no hemorrhage occurs except from the cut surface, and this ceases directly contraction takes place.

The first method, and the most generally successful one in ordinary cases, is compression of the uterus. Compression of the aorta is a useful adjunct. Elevation of the pelvis, though a most useful proceeding in the treatment of the shock which sometimes succeeds even a slight hemorrhage, is rather a waste of valuable time if compression is omitted. Hot water injection is a valuable stimulant to uterine contraction, but cannot stop hemorrhage in any other way than this, and in addition helps to clear the uterus of clot, etc.

The resort to forceps as soon as signs of exhaustion come on (not because pains are absent), and the management of the third stage without hurry, allowing plenty of time (up to an hour and a half if necessary) for the placenta to be separated naturally while the hand on the fundus guards against and serves as a warning of relaxation, are the measures which are the best means of preventing it.

Ergotin and strychnine, the former in small doses, administered during the last fortnight of pregnancy have been, in the writer's experience, associated with absence of post-partum hemorrhage in cases where it was anticipated, but this, of course, may have been a mere coincidence.

WALTER C. SWAYNE.

Reviews of Books.

Text-Book of Anatomy. Edited by D. J. CUNNINGHAM, M.D. Second Edition. Pp. xxxiii., 1388. Edinburgh: Young J. Pentland. 1906.

This a formidable work, larger much than its apparent bulk indicates, and perhaps too large for the average student.

As far as possible it has been written by various anatomists trained in the Edinburgh School, so that it may well be termed the Edinburgh Text-Book of Anatomy.

In this second edition many improvements have been made, especially in the illustrations, which may now rank with the finest in any text-book.

Additions and corrections have been made in nearly every section. In the section on "Osteology," written by Professor Arthur Thomson, one notices many additions, and we would like to suggest many more, as well as corrections. We have referred in the review of another work to the unsatisfactory account of the chondro-cranium, and all that has been said there may be said with greater emphasis here, for by now the works of Froriep, Jacobi, Levi, and others have established beyond all question the real facts of the development of the chondro-cranium, and shown that it very materially differs from the account originally given by Wiedersheim. The account, too, of the chorda dorsalis must undergo revision, more especially with regard to its relation to the basilar plate. The account of the ossification of the skull bones is very largely based on the observations of Rambaus and Renault. Many of these have not stood the test of time, and, as a consequence, accounts based on them will require revision. The systematic description of the bones is, on the whole, very satisfactory, although we think much more might have been made of the distinguishing features of certain of the vertebræ and ribs, with a view to enabling the student to identify them.

The section on joints is satisfactory, if not particularly interesting; there is little fault to be found with that on the muscular system, by Paterson; but we certainly question the accuracy of the markings of muscular attachments to the coronoid process, as figured on page 243, and the insertion of the supinator brevis is represented as a continuous area on the radius, which is well known not to be the case. However, these are small points. As to the section on the "Peripheral Nervous System," it may at once be declared to be one of the best in the book, not only from its accuracy, but from its interest.

As might be expected, the "Central Nervous System" receives authoritative treatment at the hands of the Editor, who has been careful to profusely illustrate it with a series of drawings of transverse sections of the brain stem of surpassing excellence. We know of none which equal them. Great care has been taken to keep the matter up to date, and we are glad to see due prominence given to the valuable work of Elliot Smith, as well as that of Flechsig and Bruce. The student has certainly enough food for reflection in this section.

The articles on the "Organs of Special Sense" are exhaustive, and have, perhaps, a savour of Pestut about them. We regret to see Jacobson's cartilages illustrated by a drawing of a section of the nose of a kitten, for the conditions in the kitten and man are vastly different. It has long formed a subject of discussion, this peculiar position of the Jacobsonian organ in man. Both in the

textual description of the Jacobsonian organ, and in the chapter on " Embryology," this body is described as having a close relation to the Jacobsonian cartilage, whereas no such close relation exists, as may be seen in any coronal section of the human nose up to the third month.

It would be difficult to speak too highly of the chapter on " Embryology." It is admirably written and illustrated. Here and there a point or two might have been clearer, and the erroneous statements with reference to the Jacobsonian organ have already been alluded to. Fig. II. on page 41 is not credited to any animal, but certainly does not belong to man.

Birmingham's account of the digestive system remains much as he left it, and is an extremely accurate and interesting exposition of the " formalin " body.

The article on the " Lymphatics " has undergone a thorough revision, and has benefited materially by the publication of the great French work, *Poirier et Charpy*.

The book is completed by a section on " Surgical Anatomy," written by Stiles. This is a very satisfactory article. It brings into prominence Chiene's method of locating the various fissures and convolutions of the outer aspect of the hemisphere.

There will be found in the description of the prostate a curious contradiction of the description given by Dixon of the " capsule " of the prostate. Contradiction of this kind are almost inevitable in a book of this nature and magnitude, but this, we believe, is the only one in the book, which says much for the careful editing it has undergone.

It is not an easy task to " place " this book. Honestly, one hesitates to recommend it to the ordinary student; to the University student, or the student working for the " Fellowship " examination it ought to be essential, and as a guide to the researcher it is sufficiently stimulating. Its value to the last-mentioned would be greatly enhanced by a bibliography appended to each chapter.

Gallstones and Diseases of the Bile-Ducts. By J. BLAND-SUTTON, F.R.C.S. Pp. vi., 233. London: James Nisbet & Co., Limited. 1907.

The book consists of a series of lectures delivered at the Middlesex Hospital. The various subjects are treated in a comparatively brief but lucid manner, and the work is not meant to compete with the larger monographs on these diseases.

It is a useful compendium for the student and practitioner rather than the operating surgeon. The indications for treatment are on orthodox lines, but the author holds strong views on the

desirability of performing cholecystectomy as a routine measure. This again is in accordance with the views of many surgeons, but there are arguments against, as well as for, this procedure. Because gallstones are recognised as a predisposing cause of cancer we are told that "it behoves surgeons when removing gallstones to excise the gall bladder;" but logically the removal of the stones is surely the essential need, and the desirability (if it exists) of performing cholecystectomy rests on other grounds.

There are some good illustrations and a few references at the end of the chapters.

Collected Papers on Circulation and Respiration. By Sir LAUDER BRUNTON, M.D. First Series. Experimental. Pp. xiii., 696. London: Macmillan & Co., Limited. 1906.

There is no need for us to draw attention to the very valuable experimental work which has been carried out by Sir Lauder Brunton on problems connected with circulation and respiration. In this volume is collected a series of papers which was published by him between 1867 and 1883. These papers are exceedingly interesting, and there will doubtless be many who will be glad to have them all in one volume.

Applied Bacteriology. By CRESACRE G. MOOR, M.A., F.I.C., with the co-operation of R. T. HEWLETT, M.D., D.P.H. Third Edition. Pp. 475. London: Baillière, Tindall & Cox. 1906.—The sub-title of this work—*An Elementary Handbook for the Use of Students of Hygiene, Medical Officers of Health, and Analysts*—indicates its scope. Its usefulness is demonstrated by the appearance of the Third Edition. The subject-matter has been brought well up to date, and the ground covered is sufficient for ordinary class work. In addition to micro-organisms, ferments are considered. There are chapters also on "Disinfection and Disinfectants" and on "Water, Air, &c." The illustrations are a little crude, and the thick paper makes the book inconveniently bulky.

Lectures on Midwifery for Midwives. By A. B. CALDER, M B. Pp. xi., 274. London: Baillière, Tindall & Cox. 1906.—These lectures given in rather discursive style read very well, and most of the points required for a midwife are clearly indicated. In some of the chapters, especially those on mechanisms, it might have been easier to grasp the subject if it had been tabulated. It is always difficult to follow a description, even when in good English, which runs easily from one stage to another without

definitely marking off the other. The chapter on the child and its feeding is good and rational. A very useful lecture would have been one on those cases in which it is advisable to send for a doctor, this being one of the most important points in which to instruct the midwife. The application of the Midwives' Act is clearly set out, and should be useful. Auscultation is to be practised only by the ear, in many cases a wooden stethoscope is much more valuable. The plates, although small and crowded, are on the whole very useful. We think the book will certainly find a well-merited sale.

Transactions of the American Pediatric Society. Vol. XVII. New York: E. B. Treat and Co. 1906.—There is good scientific work exhibited in this volume. Congenital laryngeal stridor is shown to be due to a folded gutter-like epiglottis, which leaves merely a chink for breathing; this condition is always present to some extent in young children, and when excessive stridor appears it must not be confused with "thymic asthma." Very early gastro-enterostomy is favoured for congenital pyloric stenosis. Citrate of soda, three grains to the ounce of milk, is very useful in intestinal dyspepsia. Intubation for diphtheria should be performed earlier than is usual. Cortical decapsulation of the kidneys for severe chronic nephritis shows better results in children than adults. Milky pleural effusions, when not due to chyle or degenerated fat, are caused by altered albumins and globulins. Several of the other papers are worth reading.

A Preliminary Inquiry concerning the Milk Supply of Schools. By C. E. SHELLY, M.D. Pp. 11. London: J. & A. Churchill. 1906.—This is a report on an inquiry, inaugurated by the Medical Officers of Schools Association, with a view to determining what statistical evidence existed either for or against the practice of boiling or sterilising the milk supplied to schools. In response to a circular forty-three replies were received, of which forty-one have been tabulated. The figures obtained are curious, but although the returns include observations on a large number of children, the figures are not really sufficient for the purpose for which they were collected. If any lesson is to be learnt, it is that we should look rather towards the securing of a pure milk supply for protection against epidemic disease than attempt to guard against infection by boiling or otherwise treating the milk. The figures are handled dexterously but with much caution by the author, and the pamphlet will be found to be interesting and suggestive to those concerned in the feeding of children at boarding schools.

A Manual of Diseases of the Eye. By CHARLES H. MAY, M.D., and CLAUD WORTH. Pp. viii., 400. London: Baillière, Tindall & Cox. 1906.—This is an excellent text-book for the medical student; it covers the ground well, and is short and

concise. The statements contained are given in a crisp manner, and so are likely to remain in the mind of the reader, but on this account the perusal of the book is rather like reading a dictionary; still, also like a dictionary, it is full of information, and can be confidently recommended to the student or practitioner who is in a hurry for his knowledge.

A Handbook of Diseases of the Nose and Pharynx. By JAMES B. BALL, M.D. Fifth Edition. Pp. xii., 388. London: Baillière, Tindall & Cox. 1906.—A text-book which has rapidly run through four editions obviously has proved acceptable to students and practitioners, and it becomes all the more essential that the work should be accurate and up to date. The author has evidently spared no pains to make the many alterations and corrections that so soon become necessary in a relatively young and developing speciality, and yet without materially adding to the size of the book, which is worthy of the author's reputation.

Davos as Health Resort. Davos: Davos Printing Company, Ltd. 1906.—This book of 316 pages, forwarded to us by the Davos Public Interests Association, consists of a series of articles written by the best authorities in Davos, and with an introduction written by Dr. W. R. Huggard, H.B.M. Consul. The contributors, sprung from many different lands in Europe, have made Davos their more or less permanent home, and have acted in friendly co-operation in producing a book which gives the best information, historical, topographical, geological, ethnological, botanical, climatic, physiological, pathological and sociological, of a place which is of profound interest to those who have visited it, and will be of interest to those who read about it. Dr. Huggard commends the volume to his brethren at home, and trusts that they will find it as interesting as they will assuredly find the place when they make its acquaintance for themselves.

The Climate of Lisbon, Mont Estoril and Cintra. By Dr. D. G. DALGADO. Pp. viii., 50. London: H. K. Lewis. 1906. —This paper is an echo of the Fifteenth International Congress, held at Lisbon in April, 1906. It is in praise of two health resorts, and its object is to show: (1) That the climate of Lisbon in winter is not variable; (2) that Mont Estoril, as a winter health resort, is in many respects superior to Biarritz, Nice and Catania; and (3) that Cintra, "the most blessed spot in the habitable globe," of Southey, is a very desirable and charming health resort in summer, but not in winter. Those of us who visited Mont Estoril last spring can well realise that the Riviera of Portugal deserves fully to make a reputation for itself as a climatic health resort. Its salubrity has been known for ages, for the monks, excellent judges of a genial climate and of good cheer, selected Estoril and Cascaes

for their monasteries. It is now a very popular sea-bathing summer resort, but endeavours are being made to extend its popularity through the winter also.

The Philippine Journal of Science. Edited by PAUL C. FREER, M.D., Ph.D. Manila. 1906.—We have received Part VI. of this new journal, published by the Bureau of Science of the Government of the Philippine Islands. The inhabitants of these islands may be congratulated on the fact that they are able to produce such an excellent periodical, which must at once take a very high position amongst the scientific journals of the world. This may be accepted as the best evidence of good government, and one of the results arising from the good influence of the United States in their eastern colonies. The article on rinderpest, from the serum laboratory of the Bureau of Science, shows that the Government is using every effort to eradicate the disease. Those which follow, on geological and botanical topics, are illustrated by means of an excellent series of photographic plates. It will be difficult to maintain the standard of this and many other of the publications of the Bureau of Government Laboratories of Manila.

On Physical Training in Schools, by W. P. HERRINGHAM, M.D., and **The Influence on National Life of Military Training in Schools,** by T. C. HORSFALL. Pp. 12. London: J. and A. Churchill. 1906.—These essays are issued by the medical officers of Schools Association, and give very terse and useful evidence in support of the views of the National League for physical education and improvement. Dr. Herringham remarks that all boys and girls ought to go through systematic physical drill, and ought to be taught that it is their proper ambition to develop their bodies and to be as well grown and strong as they can. He quotes Almond, who used to speak of it as a religious duty, and of loafing and bad hygiene as physical sin. Mr. Horsfall is convinced "that very great good would come to English children and to the whole community from the introduction of military drill and instruction in shooting into all our schools, and that there would be no drawbacks to the advantages which it would give in improvement of health, increase of public spirit and patriotism, and of increase also of the safety of the nation."

Sound and Rhythm. By W. EDMUNDS. Pp. 96. London: Baillière, Tindall and Cox.—Children in primary schools being taught singing, the author has written this little book to suggest that it would be to their advantage to be also taught the mechanism of sound and hearing. The book is written as clearly and simply as possible; still we cannot help thinking that much of it, and specially the chapter on musical scales, would be beyond the comprehension of, at any rate, young children. The first two chapters deal with the production and

conduction of sound and with the wave form of sound vibration. The third chapter treats of musical scales and intervals, harmonies, consonance, dissonance, and beat tones, &c.; the fourth with organ pipes and resonance in tubes, and the fifth with "time" and movement as illustrated by different metre in poetry and in dancing. Chapter VI. deals with the anatomy and physiology of the ear, and connected with it are a series of models, those of the ossicles much enlarged being quite good; those of the temporal bone showing inner wall of tympanum, and ossicles with drum being quite useless, at any rate for those unacquainted with its anatomy. The book ends with a short chapter on the production of the voice and finally a description of the models. The subject of the book is an extremely interesting one, and we doubt if it would be possible to deal with it in a more lucid fashion. A number of illustrations add considerably to the value of the book.

Supplementary Essays on the Cause and Prevention of Dental Caries. By J. Sim Wallace, M.D., D.Sc., L.D.S. Pp. vii., 81. London: Baillière, Tindall and Cox. 1906.—This is a book that every practitioner, medical and dental, should read with interest. It is very possible that he may not agree with much that the writer puts so forcibly and quaintly, but the book will make him think. It is calculated to disturb the complacency of anyone who imagines he knows all about dental caries. There is a most healthy want of reverence for generally received opinions.

A System of Surgical Nursing. By A. N. M'Gregor, M.D. Pp. xi., 554. Glasgow: David Bryce and Son. [1905.]—This is a large work of 550 pages. There are a very large number of works on this subject now to be obtained, and it is hard to advise a nurse as to which is the best for them to get. Many are too much devoted to surgery, but this is quite an exception in this particular. Although the main surgical points are mentioned, there is in each case a fully detailed account of the nursing aspect. The chapter on dressings and on the preparation for operation are very good and concise. A few words on the removal of plaster of Paris would have been of advantage, as it is sometimes a very difficult process. It often happens that a breast has to be emptied of its milk, a proceeding requiring great care and experience, and it is therefore a pity that the detail of this proceeding has been omitted. There are no illustrations, though in a work of this sort we doubt whether this is a disadvantage. We are rather surprised that no mention has been made of the detail required in private nursing, in fact the subject is not mentioned. Undoubtedly the book is a very valuable one, and we should think is assured of a large sale.

Practical Nursing. By Isla Stewart and Herbert E. Cuff, M.D. New Edition. Pp. viii., 436. London: William Blackwood and Sons. 1904.—We have seldom met a book

which has upheld its title as well as this volume. It is practical from beginning to end—no mere list of duties strung together, but an entirely readable accumulation of facts written in good English and in excellent style. We have no desire to criticise the subject matter; it is what it is meant to be, and undoubtedly every nurse should read it. There are a few illustrations, and rather curious ones have been chosen—Buller's shield and Leiter's coils, both very seldom used. Perhaps it is for this reason that they have been selected; also two figures showing arteries being compressed in a somewhat awkward manner. We would advise medical students to look through this work; it is intensely interesting reading, and is sure to be appreciated.

Le Livre de la Sage-Femme et de la Garde. By Dr. R. De Seigneux. Pp. 62. Genève: Henry Kündig. 1905.—This is a short hand-book for midwives published in Geneva, the author being a *privat-docent* of the University. It is an excellent short practical manual, and is the more valuable since the author has incorporated with it a series of hints on the early symptoms and treatment of cancer of the uterus. While the instructions given in it are excellent and practical, we think that it errs on the side of brevity in one or two important particulars. For example, we do not think that the treatment of post-partum hemorrhage is sufficiently dealt with by instructing the midwife to massage the uterus, give ergot, and send for a medical practitioner. This complication is so dangerous and often so sudden that the directions for its treatment cannot be too full or too exhaustive. All possible measures should be described, and the order in which they are to be applied should be laid down. In a case of this kind the patient's life depends on the prompt application of the proper remedies by the person on the spot, and the midwife should not be confined to the measures described, since, if they should prove ineffectual, medical aid would arrive too late to save the patient. The hints as to the early symptoms of cancer of the uterus are most valuable, and cannot be too widely disseminated. A series of capital forms for case-taking are embodied in the book.

Lectures upon the Nursing of Infectious Diseases. By F. J. Woollacott, M.A., M.D. Pp. vii., 147. London: The Scientific Press, Limited. 1906.—Most books on nursing are too apt to be a dissertation on the various diseases with but little on the actual nursing. In this work the reverse is the case. For this reason it is a book of considerable value. True, the symptoms are stated and a very good account of the disease is given, but it is concise, and it is followed by nursing instructions which on every page show that the author has evidently not only an intimate knowledge of the practical side of the cases, but also he has been able to collect just those little points in nursing which it is generally so hard to get out of a book. We would recommend it highly to nurses and even to medical men.

Editorial Notes.

Dual Hospital Appointments.

THE question as to whether it is or is not desirable that physicians or surgeons should have the option of holding office at more than one hospital has recently been the subject of discussion in Bristol, the committee of one of the largest medical charities having been opposed to the dual appointment of a member of their staff.

In this city we are perhaps especially fortunate in that our great medical charities are watched over and provided for by laymen who have devoted such an amount of time and money to the work they have taken in hand, that no one can doubt for one moment their single-hearted desire for the best interests of their respective institutions.

In approaching this or any question which concerns a great hospital, we must bear in mind that these institutions are really great public trusts, which exist, not for the benefit of medical practitioners, but in the first instance for the welfare of the patients who go to them for treatment, and secondly, for the advancement and teaching of medicine in all its branches; but it is obvious that the latter is in reality one of the essential factors in promoting the interests of the patients in any hospital.

The honorary staff of the particular hospital in question have pointed out that it is desirable that members of the staff "should be encouraged to practise as pure physicians and surgeons, because in that case they have more time to devote to hospital work, and therefore greater opportunities for the attainment of special knowledge and skill; and the charge of beds is an additional inducement to assistant-physicians and surgeons to adopt this line of practice." With this view we entirely agree, and would further add that we consider that those who hold appointments in the chief hospitals in a medical centre which desires and

expects a University status, ought to devote themselves to medicine, surgery, or one of the special branches, and not to engage in general practice.

It may prove desirable and necessary to lessen the number of physicians and surgeons at a hospital in order to provide sufficient scope for their acquiring the necessary experience in a limited field of practice ; but it is obviously to the best interests of any hospital to have a few masters of medical or surgical practice, rather than a larger number of general practitioners.

To leave it open to any physician or surgeon of a hospital to engage in any or every line of practice for gain, but to lay it down that the only restriction on his freedom is that he may not devote his spare time to acquiring further experience in his particular branch of medicine or surgery, not for gain but for pure love of, and keenness in, his profession, is surely to " strain at a gnat and swallow a camel."

Nothing redounds more to the credit of a hospital than to find that its physicians and surgeons are sought after, not only by the rich patients in the surrounding district, but by the smaller hospitals for the poor attending them, and we feel that it is only natural and right that the small hospitals should desire a " slice off the rich man's cake " for their own patients' benefit.

We have not touched on the question from the point of view of the physicians and surgeons on a hospital staff. But there is surely some right on their side to determine how far their liberty to employ their spare time shall be restricted by the charities they serve. If it is suggested that by serving more than one hospital any individual physician or surgeon might be overloading his time and energies, the same may be said of a large private practice, and it would be as reasonable to curtail the time he occupied in serving his private patients, or even acting in any public capacity, as to dictate limits to his services to the poor.

It is quite possible that there is room for improvement in hospital management, both in our own city and elsewhere, but any alterations must be carefully guided in the right direction, and any question that arises approached in an open

spirit, not by the Governors only, but by the doctors also, who are partners, not servants. Indeed, it is the reputation and enthusiasm of individual members of the staff on which the fame and status of any hospital mainly depends.

We have heard it said that the medical staff gain much from the prestige of their appointments; but although here in Bristol, as elsewhere, it is a privilege to be associated with a great hospital, any prestige arising therefrom is an asset created and maintained by medical men, not by the philanthropists to whom Bristol owes so much for providing the no less, but no more, essential buildings and necessary funds.

It is not, as some seem to imagine, the hospital which makes the man, but the man who makes the hospital, although in doing so he may bring credit to himself. To cite but a single example from the many names which have made Bristol hospitals renowned, we may point to Greig Smith, who made our Royal Infirmary known throughout the civilised world by his surgical work there. Yet how empty is all this reflected honour, for unless the individual man, like Greig Smith, gives far more than he takes, a hospital appointment proves for him of little or no value whatever; it is only a missed opportunity.

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The Cossham Memorial Hospital.

THE opening of this new hospital is an event which must prove of considerable importance to the district in which it is situated. The site is an ideal one, and the buildings placed upon it have been constructed with every possible care to make them as ideal as the grounds.

Arrangements are being made for fifty-two beds, and it is not intended that there shall be any out-patients. Every care is to be taken that the privileges and duties of the local medical men shall not be infringed. As the hospital is well endowed, there will be no need for any appeals to the philanthropy of the public; there will be no subscribers, and therefore no subscribers' letters of recommendation. With adequate funds for the purpose, it is

to be hoped that the services of the working staff shall in time receive due remuneration.

We give on another page an outline of the history and arrangements of the buildings and the constitution of the medical and resident staff.

The elevated position of the hospital, its isolation from any near buildings, its graceful style of architecture (early Georgian), and its central cupola with illuminated clock and Westminster chimes, will cause this hospital to become a prominent landmark, embellishing the whole district.

Notes on Preparations for the Sick.

For any chemical analyses mentioned in the following report we are indebted to Mr. O. C. M. Davis, B.Sc., A.I.C., of the University College Laboratory.

The "British Pharmaceutical Codex: an Imperial Dispensatory."—An ideal pharmacopœia should satisfy three different requirements. First, it should contain all the drugs and chemicals in general use; secondly, it should contain such combinations of these as are commonly prescribed by medical men; and thirdly, it should serve as a standard for purity of drugs and chemicals, which will be recognised by those persons responsible for the sale and preparation of these articles.

In order to in any degree comply with these three requirements it is obviously necessary that a national pharmacopœia, such, for example, as the British Pharmacopœia, shall confine itself strictly to those drugs, chemicals and formulæ which are the most universally recognised and prescribed. It necessarily leaves to other and non-official formularies a multitude of formulæ of all kinds that, while in frequent use, are not in universal use.

From this arises one of the difficulties of modern prescribing. A prescriber wishes to order, perhaps, "Spirit Soap." He has been accustomed in his hospital work to order it and get a certain preparation. If he orders it in a different part of the country he is never sure of getting the same article unless he can specify the source of the formulæ on the prescription.

There are, of course, a number of excellent formularies in common use, "Squire" and "Martindale," for example, and these to some extent meet the difficulty.

The British Pharmaceutical Society are now preparing a work, to be termed the "British Pharmaceutical Codex," which will shortly be published, which will, it is hoped, meet all requirements. It will contain, besides drugs and chemicals, formulæ for acids, baths, bougies, cerates, drops, effervescent granules, elixirs, emulsions, enemas, gargles, gauzes, insufflations, mixtures, paints, tablets, &c, &c., &c. The galenical portion of the book will therefore include more preparations than any pharmacopœia yet published, and will therefore combine the features of a hospital pharmacopœia with those of the B. P.

It is hoped that every medical man will use the book, and prescribe from it. If he then order "Elixir—(Codex)," he will ensure always getting the same preparation dispensed without the delay entailed by the pharmacist having to ring him up before dispensing the prescription.

The book can now be ordered in advance, at 10s. 6d. per copy, from the Pharmaceutical Society, or, if desired, through the pharmacist at the Royal Infirmary. As soon as published, a copy can be seen at the Dispensary of the latter institution.

Alaxa.—BURROUGHS, WELLCOME & Co., London.—Alaxa is an aromatic liqueur of cascara sagrada, which presents, in a most pleasant and acceptable condition, the laxative properties of the bark, in combination with stomachic and carminative principles. It is of agreeable flavour, and it exerts a marked tonic effect upon the bowel; it assures a normal activity, and renders unnecessary the use of after-dinner pills or digestive aids.

Alaxa is eminently suitable for use in the treatment of the constipation of pregnancy. It regulates the action of the bowel without producing irritation or griping. Whilst purgatives may adversely affect the course of pregnancy, the tonic laxative properties of alaxa maintain the normal bowel action, and prevent interference with the gravid uterus.

The dose is one to two fluid drachms, as may be required.

"**Elixoid**" **Pine Tar Compound.**—BURROUGHS, WELLCOME & Co., London.—A pleasantly-flavoured fluid preparation, containing pinol, tar, terpin hydrate, Virginian prune, balsam of Tolu, and ipecacuanha. This combination is very effective in the treatment of affections of the respiratory organs, as its active components are excreted by the lungs, and thus exert a slow, steady and continuous action. It is believed to allay pulmonary irritation, and is of special service in chronic bronchitis and bronchorrhœa; it also relieves coughs, and may be used in cases in which the preparations of opium are inadvisable. Half to two fluid drachms may be given three or four times a day after meals.

Nizin.—BURROUGHS, WELLCOME & Co., London.—Under this name Messrs. Burroughs and Wellcome have introduced the zinc salt of sulphanilic acid, which is recommended for preparing antiseptic solutions and injections.

The antiseptic value of the sulphonic acids has been recognised for many years, and zinc-sulphocarbolate (the zinc salt of phenol-para-sulphonic acid) was included in the British Pharmacopœia as far back as 1885.

Sulphanilic acid (amido-benzene-para-sulphonic acid) differs from the phenol-sulphonic acids by the substitution of the amido group ($-NH^2$) for the hydroxyl group (-OH), and this small difference may cause a very profound change in the pharmacological action.

Whether Nizin is superior to zinc-sulphocarbolate or not must be determined by clinical observations, but we imagine it will prove equally valuable as an antiseptic, and less liable to cause irritation. The Soloid (gr. 7) affords a ready means of preparing fresh solutions for urethral injections and for eye-lotions.

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the List in March.

May 31st, 1907.

J. Paul Bush, C.M.G. (1)	3 volumes.
L. M. Griffiths (2)	10 ,,
R. Shingleton Smith, M.D. (3)	2 ,,
William Warren Potter, M.D. (4)	4 ,,

SIXTY-FOURTH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented. The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

Adami, J. G. .. *Inflammation* 1907

Allbutt and H. D. Rolleston, T. C. *A System of Medicine.* Vol. II., Part 2 1907

Bland-Sutton, J. *Gall-Stones and Diseases of the Bile-Ducts* 1907

Buchanan, A. M. *Manual of Anatomy.* Vol. II. 1907

Chlorine, The Disinfectant Value of .. .. [N.D.]
Cocks, W. P. .. *Treatise on Operative Surgery* .. .. (2) 1837
Cripps, H. .. *On Diseases of the Rectum and Anus* .. 3rd Ed. 1907
„ .. *Cancer of the Rectum* 1907
Crowley, R. H. *The Need, Objects, and Method of the Medical Inspection of Primary Schools* 1907
Deanesly, E. .. *Modern Methods of Diagnosis in Urinary Surgery* 1907
Encyclopedia and Dictionary of Medicine and Surgery, Green's Vol. IV. [1907]
Feindel, H. Meige and E. *Tics and their Treatment* (Trans. and Ed. by S. A. K. Wilson) 1907
Gadd, H. W. .. *A Synopsis of the British Pharmacopœia* (1898) 6th Ed. 1907
Hare, H. A. .. *Text-Book of the Practice of Medicine* .. 2nd Ed. 1907
Herman, G. E. *Diseases of Women* .. .. [3rd Ed.] 1907
„ .. *First Lines in Midwifery* .. .. .. New Ed. 1907
Hope, Mrs. .. *Memoir of James Hope, M.D.* (Ed. by K. Grant) (2) 2nd Ed. 1843
Lange, F. .. *Degeneration in Families* (Trans. by C. C. Sonne) 1907
Latham, A. .. *Pulmonary Consumption* .. .. 3rd Ed. 1907
Lettsom, J. C. *Hints designed to promote Beneficence, &c.* .. (2) Vols. II., III. 1801
Lister, Lord .. *The Third Huxley Lecture* .. .. (1) 1907
Lloyd, W. .. *Hay-Fever, Hay-Asthma* 1907
McKisack, H. L. *A Dictionary of Medical Diagnosis* 1907
Meige and E. Feindel, H. *Tics and their Treatment* (Trans. and Ed. by S. A. K. Wilson) 1907
Page, F. J. M. *Elements of Physics* 1907
Palmer, "The Times" Report of the Trial of William .. .. (2) 1856
Rabagliati, A. *The Functions of Food in the Body* 1907
Ramsay, A. M. *Eye Injuries* 1907
Rolleston, T. C. Allbutt and H. D. *A System of Medicine* Vol. II., Pt. 2 1907
Von Noorden, C. *Metabolism and Practical Medicine* (Ed. by I. Walker Hall). Vols. I., II. 1907
Walker, J. W. T. *The Renal Function in its Relation to Surgery* .. 1907
Wells, J. W. .. *The Influence of Cod-liver Oil on Tuberculosis* .. 1907

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MEETINGS OF SOCIETIES.

Bristol Medico-Chirurgical Society.

March 13th, 1907.

Mr. JAMES TAYLOR, President, in the Chair.

The meeting was devoted to the consideration of **Cases** and **Specimens** illustrating various phases of **Syphilis.**

Professor WALKER HALL and Dr. CAREY COOMBS demonstrated **Pathological Specimens,** macro- and microscopical.

Dr. MICHELL CLARKE showed sections illustrating **Syphilitic Diseases of the Brain and Spinal Cord.**

The following cases were shown:—**Charcot's Disease of the Knee Joints,** by Dr. ALEXANDER; **Disseminated Choroiditis,** by Dr. OGILVY; **Relapsing Chancre, Spontaneous Fracture of Tibia,** and **Tertiary Periostitis of Radius,** by Mr. HEY GROVES; **Secondary Syphilis** with **Sloughing Tonsil** and **Suppurating Glands in the Neck, Necrosis of the Lower Jaw, Congenital Ulceration of Nares and Palate,** and **Recurrent Gummatous Ulceration of the Scalp,** by Dr. KENNETH WILLS.

Patient treated with **Intra-muscular Injections of Lactate of Mercury**, and a patient with a **Tubercular Syphilide,** the disease having been acquired innocently, by Dr. NIXON.

April 10th, 1907.

Mr. JAMES TAYLOR, President, in the Chair.

Mr. C. A. MORTON showed a specimen of **Large Ovarian Tumour,** weighing 10½ lb. and measuring 13 in. by 10 in. by 6 in., which had been removed from a child of ten years of age. Sections showed the tumour was an adeno-sarcoma.

Dr. E. C. WILLIAMS showed (1) A boy with **Enlarged Liver and Spleen.** The spleen, first noticed about Christmas last, extended downwards nearly to the iliac crest and forwards to the middle line. The liver edge could be felt two inches below the costal margin. There was slight jaundice, slight clubbing of the fingers and toes. There was a faint systolic murmur at the heart's apex. Leucocytosis was distinct, pointing to the presence of an infective agent. The disease did not appear to be due to any of the exanthemata. (2) A case of **Sporadic Cretinism** in a girl aged 3½ years, after six months' treatment with thyroid extract. There had been very marked improvement. Nothing abnormal had

been noticed in the child until after whooping-cough at four months of age.

Dr. EDGEWORTH read notes on a case of **Double Consciousness.** In the dreams of sleep there is no sharp division between perceptions and conceptions, for the latter are projected and have the character of perceptions; secondly, in dreams, there is an entire absence of logical control; and thirdly, the emotional side of mental processes is exaggerated. The condition of hypnosis is closely related to that of dream-consciousness. Some of the hypnotised remember the events of the hypnotic state; others entirely forget them on waking. In spontaneous somnambulism the individual possesses sense-perceptions and translates his motor ideas into acts. The condition of double personality is clearly akin to somnambulism, but differs from it in that its onset is in waking life, and also in its prolonged duration. The example the speaker described was that of a man who found himself, he thought, in Old Market Street, Bristol, and asked his way to the police station, but could not tell his name nor where he came from, nor how he happened to be in Bristol. He was brought to the Royal Infirmary. A clue was found through his shirt markings, and it was discovered that a man had been missing from the town so discovered. A police officer, armed with this information, asked the man if he was Mr. —— of a certain town. The man said yes, with astonishment. In a little while the man's memory returned, but he could not recall leaving his native town, nor any event since then until coming partly to himself in Old Market Street. He had been missing from home a month, but what he had done in that month remains a mystery. There are many similar cases on record. In one, the man when hypnotised recollected what he had done during six weeks of aberration, but could not recollect it unless hypnotised. It is the subconscious or infra-liminal ideas, thoughts, sensations and perceptions which form the basis of dream-consciousness, somnambulism, hypnosis and double personality.

Dr. WALTER SWAYNE read a paper on **Cerebral Complications in Pregnancy and Parturition.**

Dr. CAREY COOMBS read a paper on **Rheumatic Carditis in Childhood.**

Dr. BERTRAM ROGERS read notes on a case of **Sclerodermia with Trophic Lesions.**

J. LACY FIRTH.
H. F. MOLE, *Hon. Sec.*

Local Medical Notes.

University College, Bristol.—*Examination Results.*—The following successes have recently been gained:—

CONJOINT BOARD.—*Biology:* B. G. Derry, A. G. T. Fisher, G. H. Piercy. *Anatomy and Physiology:* R. C. Clarke, J. F. H. Morgan. *Medicine:* J. W. J. Willcox.* *Surgery:* A. E. Iles, E. J. Dermott, P. S. Connellan,* C. E. K. Herapath.* *Midwifery:* R. G. Vaughan.

L.D.S.—*Chemistry and Physics:* F. C. Willows. *Mechanical Dentistry and Dental Metallurgy:* G. F. Fawn, W. E. Drummond, I. R. Hudleston, P. J. Burton. *Final Examination:* C. A. Joll.* *Part II. only:* W. H. Ireland.*

L.S.A.—*Medicine (Part I.) and Forensic Medicine:* J. F. McQueen.

Appointments.—D. S. Davies, M.D. Lond., has been appointed Examiner in State Medicine for the University of London. C. E. K. Herapath, M.R.C.S., L.R.C.P., has been appointed Casualty Officer at the Bristol Royal Infirmary. Cyril C. Lavington, M.B., B.S. Durh., has been appointed Out-Patient Physician to the Bristol Children's Hospital. Frederick H. Rudge, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Torbay Hospital, Torquay. E. H. E. Stack, M.B., B.C. Cantab., F.R.C.S. Eng., has been appointed Honorary Assistant Surgeon to the Bristol Eye Dispensary.

Bristol General Hospital.—As mentioned in our last issue, a public appeal has been made for £18,000 for this institution for greatly needed improvements. It is announced that £15,550 have already been promised, and it is hoped that the remainder will be obtained shortly.

Royal United Hospital, Bath.—The late Dr. Thomas J. Bennett, formerly of Tunbridge Wells, has bequeathed the whole of his estate, subject to certain legacies, amounting to £20,000 to this institution. This sum will be devoted to the augmentation of the permanent endowment of the hospital. This legacy will not interfere with the efforts of the Mayor of Bath, who is trying to extinguish the debt of £6,000 against the hospital.

Royal Mineral Water Hospital, Bath.—At the annual meeting of this institution held recently it was stated that 1,185 in-patients had been admitted during 1906, an increase of 24 compared with 1905. The average daily number of occupied beds was 145. An unfavourable balance of £214 on the year's working was reported.

Winsley Sanatorium, Bath.—At a recent meeting of the House

* Completes examination.

Committee it was pointed out that certain beds could now be allocated to persons residing within the counties of Somerset, Gloucester and Wilts, on payment of 35s. per week, and persons living outside these districts could be admitted for £2 10s. weekly, provided there were vacant beds not required by residents of the three counties. Application should be made to the Secretary.

Cardiff Infirmary.—In the annual report of this institution an appeal has been made for £30,000 in order to accommodate sixty-four additional in-patients, bringing the total number of beds up to 250. The infirmary serves a district comprising a population approaching half a million, and there are constantly between 500 and 600 patients awaiting admission. A promise of £5,000 has already been received provided the remaining £25,000 are subscribed within six months.

Royal Devon and Exeter Hospital, Exeter.—At a meeting of the Governors held recently it was reported that the adverse balance against the institution amounted to £1,392, being £866 more than last year. The chairman pleaded for more general support, failing which more funded stock would have to be sold.

The Workmen's Compensation Act.—An interesting case, bristling with medical technicalities and details, was heard in a local County Court recently. The applicant was a pork butcher's assistant, aged 26, who sustained an accident on the 2nd October, 1906, straining himself by lifting a heavy lead-lined pickle-tub. His statement was that he felt something had gone wrong, and pain had come in his left shoulder when he got home. He worked on and did not seek medical advice from his club doctor until five weeks after the alleged accident, on a day when he asserted that he fainted while standing at his own fireside doing nothing. During the long period between the accident and this the pains grew gradually worse, and in his own words, his heart "did beat very hard." He was treated for a month in a local hospital, and there seems to have been some doubt as to the diagnosis. The disease, however, was designated subclavian aneurysm. Later on the man brought an action against his master on the grounds that he had sustained an injury in the course of his employment which determined the illness.

Ample scope was given during the inquiry at the Court for the minute discussion of aneurysm in all its bearings. Counsel for the respondent, with his then knowledge of the subject, would have little difficulty in satisfying any medical examining board. Medical witnesses were at the table *vis-à-vis*, and much interest was taken in the case. The point originally raised was that the applicant had strained an artery under the collar bone. What was the disease. Was it aneurysm or something of a less grave nature ?

The Ocean Accident Company sent down one of their medical referees, who with one of the local doctors minutely examined the applicant. Separately at first, and then together, they concluded that the man had no aneurysmal dilatation whatever.

When the case came on for hearing, the diagnosis suddenly veered round from the region of the subclavian artery to the arch of the aorta. Physical signs were adduced—an accentuated second aortic sound and a loud and distinct murmur conducted towards the axilla. There was some pulsation above the clavicle, and the medical witness could feel the artery quite distinctly.

By His Honour the Judge: "And what was your deduction from this?"

Answer: "That the man had strained the arch of the aorta." Later on, in reply to the Counsel for the respondent: "The aneurysm was traumatic, not spontaneous."

Another medical man had examined the patient and signed the disease up as subclavian aneurysm. This was a lever for further cross-examination.

"Would you agree or disagree with this diagnosis?"—"I should not entirely agree."

"Then you disagree on that?"—"I do not entirely disagree. Aneurysms may be of different degrees. I consider it was the beginning of the dilatation which ultimately leads to serious aneurysm."

The Judge: "You say there was aneurysm, but it was so small as not to appreciably make itself apparent?"

Answer: "There was no swelling, but there was undoubtedly slight aneurysm."

By the Counsel: "Was there or was there not an aneurysm? . . . I cannot accept your answer unless you tell me where mere dilatation ends and aneurysm begins."

Answer: "I should say in this sense there was an aneurysm."

Further on by the medical witness: "He is better, he is comparatively well."

The medical opinions on behalf of the respondent were to the effect that the man did not suffer from aneurysm, and had no signs of ever having had such.

The Judge asked whether a small aneurysm in November might not have disappeared in April.

Answer by one witness: "It would have been so small that it could not be diagnosed." Later: "The first and essential step in diagnosing an aneurysm is the presence of a tumour or swelling."

On the question of the man's symptoms the Judge cross-examined one of the medical witnesses:

"Did not the strain of the accident cause all that the medical witness for the applicant had described—Yes or No?—palpitation, for instance, which the man stated he still suffered from six months after the accident."

The Judge seemed very irritated by the medical witness giving a qualifying answer.

"Would not a bicycle ridden too hard cause palpitation—Yes or No?"

The character of the man's pain was scarcely that which one would have expected in an aneurysmal dilatation of the aorta, as he described it, "in his left shoulder shooting up to his ear and down into his heart." The pain was persistent since the accident six months ago.

The decision arrived at by His Honour was easily anticipated. He had to determine whether the applicant's illness was due to an accident, and if so, what was the cause of the accident, and whether it arose in the course of the man's employment. He found that the applicant did meet with an injury from the lifting of the pickle-tub, that he was subsequently ill owing to an undue strain, and he was still suffering from it. Incidentally he remarked that he had had two doctors before him who formed an opposite opinion, but he had to consider what was the means of knowledge they had in forming their opinion. They did not see the man until a long time after the accident, and therefore it was very difficult for them to say what was the cause of an illness that commenced months and months before.

Cossham Memorial Hospital.—The late Mr. Handel Cossham, who had represented in Parliament this division of Bristol—the East—for several years and until his death, left in his will his residuary estate for the purpose of establishing a hospital. He had no children, but left a widow, and as he was never considered a wealthy man, it seems most likely that the charitable institution that was present to his mind—generous and beneficent as it was—would at the most be a fair-sized Cottage Hospital.

Owing to various circumstances the estate got into Chancery, and this occasioned a considerable delay in the winding-up. Strange to say, this delay was a fortunate thing, for the Trustees had to manage the collieries and keep them going, and luckily they fell upon very good times in the coal trade, which is always a fluctuating one, and made excellent profits. Not only so, but the collieries were sold at the top of the financial wave; and so, in the end, the grand total of £120,000 was in hand for building and endowment. The site chosen is at the top of Lodge Hill, in the parish of Fishponds, but in close proximity to the populous district of Kingswood; and with the land around the hospital, and two well-made private roads, consists of nearly fifty acres. The ground is high—the highest in the district—and is about 350 feet above sea-level. It commands a most extensive prospect, and especially from the balcony on the central tower. To the north are the Cotswolds, about Wotton-under-Edge; to the east Kelston and Lansdown hills and the Bath districts; to the south the Mendips; and more westerly Bristol itself; whilst to the

west are the Severn Valley, the Forest of Dean, and the distant hills of Wales.

The neighbourhood is also a historical one. Years ago it formed part of the king's wood, and almost within a stone's throw of the hospital is a large round brick tower, which is said to represent a hunting-tower in the reign of King John. Below Lodge Hill on the western side runs "The Causeway," an old Roman road to Bath.

The building itself is very imposing, being constructed of the grey stone of the neighbourhood, faced with the best Bath or Corsham stone. The centre block contains the entrance hall, surgeon's and matron's sitting rooms, the reception and board rooms, the surgery, dispensary, and at the back the kitchens and offices. On the western side rises up the tower, already spoken of. This tower has a copper-covered cupola and an illuminated clock (four faced, and furnished with the Westminster chimes). This clock is connected by electric wires with all the time-pieces in the establishment, so that everywhere the time is synchronous. Near this tower, at its base, are the two surgical wards, male and female, and also the great staircase leading up to the first floor, where are also two similar wards, the medical male and female. On the ground floor, to the south of the wards, is the operating theatre. This is one of the handsomest and the best equipped in the country. The floor is laid with white square tiles, slightly toughened on the surface; the walls are covered with pale green-coloured tiles, highly vitrified and known as "Brit-Opal," made and placed by the Adamant Co., Ltd., Birmingham. Above the cornice line white tiles are used, and carried up into the lantern, which gives light and assists also in the ventilation of the theatre. Where the floor level ends the edges are mitred and decorated with darker tiles, so that here and wherever edges meet, so to speak, everything is rounded off, leaving no edges anywhere for dust or germs to rest. All the tiles are embedded in Portland cement, and secured in place with Birmingham cement. On each side of the theatre is a large radiator, heated with low-pressure steam, and guaranteed by the contractors—Messrs. Bradford—to give a temperature of 75° F. on the coldest winter night. Behind each radiator is an inlet for cold fresh air, and a continuous circulation of air is maintained by two fans in the ceiling. Leading into the theatre are two smaller rooms, all constructed with the same materials, the anæsthetising room and the sterilising one. The sanitary arrangements consist of lavatories, tanks and ample discharge pipes, which terminate in a deep glazed channel which runs the length of one side of the floor.

The water supply consists of pure hot and cold sterilised and ordinary hot and cold water. The supply is introduced by means of copper pipes, including the necessary ties and clips,

½-inch hot and cold water, quarter-turn taps, and wrist-action taps, sprays and douches.

The four wards are all the same size. They are large and spacious, and will furnish ample cubic capacity for the ten adult beds and two cots which are being placed in each one. The floors are laid with cement, and covered with teak blocks. The patients' lockers are also of teak, with brass fittings, and the chairs made of dark-stained wood, all of which will form a good contrast to the best Lawson-Tait bedsteads in white enamel and the bright-coloured bedspreads. In the centre of each ward is a stove, which can be used for extra warming should the radiators alongside the walls be insufficient in cold weather, and near each stove a handsome plate-glass covered table, fitted with drawers at each end.

Leading out of the far end of each ward are lavatories and w.c.'s, furnished with the most approved fittings, and on each floor is a very commodious ward kitchen and larder. Adjoining the wards on each floor there is a day room for patients, the one on the ground floor for females, and the one above for males. This latter one has a covered open-air space and an open balcony, where the men may smoke at times. On each floor are bath-rooms for the patients. At the north end of the building are the isolation wards. These are separated from the rest of the building by double doors and an intervening corridor. There are wards on each floor, with separate offices, and nurses' sitting and sleeping rooms. Connected with these wards is an out-door spiral staircase, which can be used in cases of emergency. The same arrangements exist for the other main wards.

In the basement are various offices, but worthy of special note are a dark room for photography, an X-ray chamber, and the *post-mortem* room.

Beyond the main building, westward, is another distinct block, where are the laundry, engine-room, stable, coach-house, and mortuary.

As the capabilities of the hospital in every way are beyond those of the ordinary cottage hospital, the Committee determined to have an honorary working staff and an honorary consulting staff commensurate with these surroundings. The honorary consulting staff is represented by two physicians and two surgeons, and these are respectively Dr. Shingleton Smith and Dr. J. Odery Symes, and Mr. C. A. Morton and Dr. James Swain. The honorary working staff is Dr. Nixon and Dr. Bertram Rogers as the physicians, and Dr. E. Hey Groves and Dr. Stack as surgeons. Mr. A. L. Flemming has been appointed anæsthetist. The house surgeon is Dr. G. C. Mort, of the Victoria University, Manchester, and the matron, Miss Maun, late of the Infirmary, Gloucester.